



WASTE MANAGEMENT

92-460 Farrington Hwy.  
Kapolei, HI 96707  
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February 6, 2013

Ms. Kris Poentis, Engineering Section  
State Department of Health  
Environmental Management Division  
Clean Water Branch  
919 Ala Moana Blvd. Room 301  
Honolulu, HI 96814

**Subject:** Waimanalo Gulch Sanitary Landfill, Kapolei, Oahu, Hawaii  
File No. HI R50A533

Dear Ms. Poentis:

On the morning and early afternoon of Monday, January 14, 2013, rainfall caused a discharge of stormwater into the detention basin at the Waimanalo Gulch Sanitary Landfill. Field measurements of pH and an analytical grab sample were collected from ponded water at the Detention Basin East Outfall (DB01-E), which had negligible or no flow at the time. No stormwater flowed off site due to the storm event.

The analytical laboratory report indicated that Iron, Lead, Zinc, and Total Suspended Solids (TSS) in the sample were present in excess of State Water Quality Standards. Attached is the Laboratory Data Report. The exceedances are listed in Table 1 below, along with the corresponding discharge limitation per the latest Waimanalo Gulch Sanitary Landfill (WGSL) Notice of General Permit Coverage (NGPC), dated August 30, 2010:

**Table 1: WGSL Storm Water Sampling Exceedances at the Compliance Point**

Parameter	Result (mg/L)	Effluent Limitation (mg/L)
Iron	25	1
Lead	0.05	0.029
Zinc	0.26	0.022
TSS	340	100

mg/L milligram per liter

A representative of Waste Management of Hawaii (WMH) made a verbal notification of the potential exceedance to the Hawaii State Department of Health, Clean Water Branch (CWB) on February 5, 2013.

A pH exceedance (field measurement of 8.97 units, versus a limit of 5.5 to 8.0) was also noted during the January 14<sup>th</sup> sampling event. The notice of that exceedance was made on January 16, 2013.

No direct cause for the iron, zinc, and TSS exceedances could be identified. Exceedances of iron, zinc, and TSS have been reported in the past.

*From everyday collection to environmental protection, Think Green® Think Waste Management.*

Furthermore, no direct cause for the lead exceedance could be identified. Lead was detected at only low concentrations in the past. Though the samples were filtered in the field, the laboratory noted presence of sediment, and it is suspected that naturally occurring background levels in surrounding soils are the primary source of the lead exceedance.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to ensure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

If you should have any questions or require additional information, please contact me at (808) 668-2985.

Very truly yours,



Joseph Whelan  
General Manager/Vice President  
Waste Management of Hawaii

Enclosures: Attachment A – Analytical Report

cc: Wayne Hamada - City and County of Honolulu  
Justin Lottig - WMH  
Jesse Frey – WMH  
Mark Hofferbert – AECOM Technical Services

## ANALYTICAL REPORT

Job Number: 280-37877-1

Job Description: 995|Waimanalo Gulch LF

For:

Waste Management  
Waimanalo Gulch Landfill  
92-460 Farrington Highway  
Kapolei, HI 96707

Attention: Mr. Justin Lottig



Approved for release.  
Betsy A Sara  
Project Manager II  
1/30/2013 1:09 PM

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Betsy A Sara  
Project Manager II  
betsy.sara@testamericainc.com  
01/30/2013

cc: Mr. Mark Hofferbert  
Ms. Margie Thach

The test results in this report relate only to the samples in this report and meet all requirements of NELAC, with any exceptions noted. Pursuant to NELAP, this report shall not be reproduced except in full, without the written approval of the laboratory. All questions regarding this report should be directed to the TestAmerica Denver Project Manager.

The Lab Certification ID# is E87667.

Reporting limits are adjusted for sample size used, dilutions and moisture content if applicable.

**TestAmerica Laboratories, Inc.**

TestAmerica Denver 4955 Yarrow Street, Arvada, CO 80002  
Tel (303) 736-0100 Fax (303) 431-7171 [www.testamericainc.com](http://www.testamericainc.com)



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## CASE NARRATIVE

Client: Waste Management

Project: 995|Waimanalo Gulch LF

Report Number: 280-37877-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

This report may include reporting limits (RLs) less than TestAmerica's standard reporting limit. The reported sample results and associated reporting limits are being used specifically to meet the needs of this project. Note that data are not normally reported to these levels without qualification because they are inherently less reliable and potentially less defensible than required by the latest industry standards.

### Sample Receiving

The samples were received on 01/17/2013; the samples arrived in good condition, properly preserved and on ice. The temperatures of the coolers at receipt were 2.5C and 2.6C.

Total Kjeldahl Nitrogen was not listed on the chain of custody for analysis, however, this analysis is required for the Total Nitrogen calculation and is also included in the site addendum for this event and was analyzed. The client was notified 1/18/13.

### Holding Times

All holding times were met.

### Method Blanks

Total Phosphorus Method 365.1 was detected in the Method Blank below the project established reporting limit. No corrective action is taken for any values in Method Blanks that are below the requested reporting limits. The Method Blank data are included at the end of this report.

All other Method Blanks were within established control limits.

### Laboratory Control Samples (LCS)

All Laboratory Control Samples were within established control limits.

### Matrix Spike (MS) and Matrix Spike Duplicate (MSD)

The method required MS/MSD could not be performed for Method 625 and Method 1664A due to insufficient sample volume, however, LCS/LCSD pairs were analyzed to demonstrate method precision and accuracy.

The Matrix Spike and Matrix Spike Duplicate performed on a sample from another client exhibited recoveries outside control limits for Total Kjeldahl Nitrogen Method 351.2. Because the corresponding Laboratory Control Sample and the Method Blank sample were within control limits, this anomaly may be due to matrix interference and no corrective action was taken.

Sample DB01-E was selected to fulfill the laboratory batch quality control requirements for Method 365.1. Analysis of the laboratory generated MS/MSD for this sample exhibited recoveries of Total Phosphorus below the lower control limit indicating the possible presence of a matrix interference.

All other MS and MSD samples were within established control limits.

### Organics

The Method 625 surrogate recovery of Terphenyl-d14 was below control limits in the analysis of sample DB01-E. All other surrogate recoveries were within QC control limits. EPA surrogate guidelines for GC/MS SVOA is that two of the three surrogates for each fraction must meet acceptance criteria. The third surrogate must have a recovery of ten percent or greater. As sample analysis met these criteria, corrective action is deemed unnecessary.

The sample FLIP BUCKET was diluted for Method 625 to bring the concentration of target analytes within the calibration range. Elevated reporting limits (RLs) are provided. In addition, the Method 625 surrogate result of Terphenyl-d14 for the sample FLIP BUCKET was below

the laboratories quantitation level due to the dilution performed on the sample. As a result, the laboratory does not rely on the reported recoveries for quality control evaluation purposes

#### **General Comments**

The analysis for Biochemical Oxygen Demand (BOD) was performed at TestAmerica's Honolulu facility.

TestAmerica Honolulu  
99-193 Aiea Heights Drive  
Suite 121  
Aiea, HI 96701  
Phone: 808.486.5227

The analysis for Hexavalent Chromium was performed at TestAmerica's Irvine facility.

TestAmerica Irvine  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614  
Phone: 949.261.1022

For samples requiring analysis at a dilution, the dilution factor has been multiplied by the Method Detection Limit (MDL) for each analyte and evaluated versus the project-specific reporting limit (PSRL). If the obtained value is below the PSRL, then the PSRL is preserved as the reporting limit for the diluted result, otherwise, the obtained value becomes the reporting limit. This is done in order to maintain the PSRL to meet permit requirements at the request of the client and to report the lowest possible RL for each analyte.

## EXECUTIVE SUMMARY - Detections

Client: Waste Management

Job Number: 280-37877-1

Lab Sample ID	Client Sample ID	Result	Qualifier	Reporting Limit	Units	Method
<b>280-37877-1</b>	<b>DB01-E</b>					
Mercury		0.00014	J	0.00020	mg/L	245.1
Field pH		8.97			SU	Field Sampling
HEM		4.8	J	5.0	mg/L	1664A
Ammonia		0.37		0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.67		0.50	mg/L	351.2
Nitrate Nitrite as N		4.7		0.10	mg/L	353.2
Phosphorus, Total		1.2	B	0.050	mg/L	365.1
Chemical Oxygen Demand		73		20	mg/L	410.4
Total Suspended Solids		340		5.5	mg/L	SM 2540D
Nitrogen, Total		5.4		0.10	mg/L	Total Nitrogen
<b><i>Dissolved</i></b>						
Chromium, hexavalent		1.6		1.0	ug/L	218.6
<b><i>Total Recoverable</i></b>						
Arsenic		0.0073	J	0.015	mg/L	200.7 Rev 4.4
Cadmium		0.0013	J	0.0050	mg/L	200.7 Rev 4.4
Iron		25		0.10	mg/L	200.7 Rev 4.4
Lead		0.050		0.0090	mg/L	200.7 Rev 4.4
Zinc		0.26		0.020	mg/L	200.7 Rev 4.4
<b>280-37877-2</b>	<b>FLIP BUCKET</b>					
Benzoic acid		0.039	J	0.050	mg/L	625
Mercury		0.000043	J	0.00020	mg/L	245.1
Field pH		9.29			SU	Field Sampling
HEM		2.6	J	5.0	mg/L	1664A
Ammonia		0.070	J	0.10	mg/L	350.1
Nitrogen, Kjeldahl		0.38	J	0.50	mg/L	351.2
Nitrate Nitrite as N		0.78		0.10	mg/L	353.2
Phosphorus, Total		0.73	B	0.050	mg/L	365.1
Chemical Oxygen Demand		82		20	mg/L	410.4
Total Suspended Solids		300		5.5	mg/L	SM 2540D
Nitrogen, Total		1.2		0.10	mg/L	Total Nitrogen
<b><i>Dissolved</i></b>						
Chromium, hexavalent		2.0		1.0	ug/L	218.6
<b><i>Total Recoverable</i></b>						
Arsenic		0.0047	J	0.015	mg/L	200.7 Rev 4.4
Iron		22		0.10	mg/L	200.7 Rev 4.4
Lead		0.0068	J	0.0090	mg/L	200.7 Rev 4.4
Zinc		0.079		0.020	mg/L	200.7 Rev 4.4

## METHOD SUMMARY

Client: Waste Management

Job Number: 280-37877-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Semivolatile Organic Compounds (GC/MS)	TAL DEN	40CFR136A 625	
Liquid-Liquid Extraction	TAL DEN		40CFR136A 625
Metals (ICP)	TAL DEN	EPA 200.7 Rev 4.4	
Preparation, Total Recoverable Metals	TAL DEN		EPA 200.7
Mercury (CVAA)	TAL DEN	EPA 245.1	
Preparation, Mercury	TAL DEN		EPA 245.1
HEM and SGT-HEM	TAL DEN	1664A 1664A	
HEM and SGT-HEM (SPE)	TAL DEN		1664A 1664A
Nitrogen, Ammonia	TAL DEN	MCAWW 350.1	
Nitrogen, Total Kjeldahl	TAL DEN	MCAWW 351.2	
Nitrogen, Total Kjeldahl	TAL DEN		MCAWW 351.2
Nitrogen, Nitrate-Nitrite	TAL DEN	MCAWW 353.2	
Phosphorus, Total	TAL DEN	EPA 365.1	
Phosphorus, Total	TAL DEN		MCAWW 365.2/365.3/365
COD	TAL DEN	MCAWW 410.4	
Solids, Total Suspended (TSS)	TAL DEN	SM SM 2540D	
Nitrogen, Total	TAL DEN	EPA Total Nitrogen	
Field Sampling	TAL DEN	EPA Field Sampling	
General Sub Contract Method	TAL HON	Subcontract	
Chromium, Hexavalent (Ion Chromatography)	TAL IRV	EPA 218.6	
Sample Filtration, Field			FIELD_FLTRD

**Lab References:**

TAL DEN = TestAmerica Denver

TAL HON = TestAmerica Honolulu

TAL IRV = TestAmerica Irvine

**Method References:**

1664A = EPA-821-98-002

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

## METHOD / ANALYST SUMMARY

Client: Waste Management

Job Number: 280-37877-1

<b>Method</b>	<b>Analyst</b>	<b>Analyst ID</b>
40CFR136A 625	Hoffman, Michael G	MGH
EPA 200.7 Rev 4.4	Harre, John K	JKH
EPA 245.1	Mooney, Joseph C	JM
EPA Field Sampling	Field, Sampler	FS
1664A 1664A	Benson, Alex F	AFB
MCAWW 350.1	Allen, Andrew J	AJA
MCAWW 351.2	Woolley, Mark	MW
MCAWW 353.2	Scott, Samantha J	SJS
EPA 365.1	Scott, Samantha J	SJS
MCAWW 410.4	Bandy, Darlene F	DFB
SM SM 2540D	Woolley, Mark	MW
EPA Total Nitrogen	Sullivan, Roxanne	RS
EPA 218.6	Welch, Raquel	RW

## SAMPLE SUMMARY

Client: Waste Management

Job Number: 280-37877-1

<b>Lab Sample ID</b>	<b>Client Sample ID</b>	<b>Client Matrix</b>	<b>Date/Time Sampled</b>	<b>Date/Time Received</b>
280-37877-1	DB01-E	Water	01/14/2013 1258	01/17/2013 0900
280-37877-2	FLIP BUCKET	Water	01/14/2013 1307	01/17/2013 0900

# **SAMPLE RESULTS**

**Analytical Data**

Client: Waste Management

Job Number: 280-37877-1

**Client Sample ID: DB01-E**

Lab Sample ID: 280-37877-1

Date Sampled: 01/14/2013 1258

Client Matrix: Water

Date Received: 01/17/2013 0900

**625 Semivolatile Organic Compounds (GC/MS)**

Analysis Method:	625	Analysis Batch:	280-156637	Instrument ID:	SMS_Y
Prep Method:	625	Prep Batch:	280-156338	Lab File ID:	Y2497.D
Dilution:	1.0			Initial Weight/Volume:	1023 mL
Analysis Date:	01/23/2013 0153			Final Weight/Volume:	1000 uL
Prep Date:	01/18/2013 1209			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.0098	0.050
p-Cresol	ND		0.00024	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	95		50 - 120
2-Fluorobiphenyl	68		36 - 120
2-Fluorophenol	65		30 - 120
Nitrobenzene-d5	74		45 - 120
Phenol-d5	73		36 - 120
Terphenyl-d14	33	X	52 - 120

Analytical Data

Client: Waste Management

Job Number: 280-37877-1

Client Sample ID: FLIP BUCKET

Lab Sample ID: 280-37877-2

Date Sampled: 01/14/2013 1307

Client Matrix: Water

Date Received: 01/17/2013 0900

625 Semivolatile Organic Compounds (GC/MS)

Analysis Method:	625	Analysis Batch:	280-156637	Instrument ID:	SMS_Y
Prep Method:	625	Prep Batch:	280-156338	Lab File ID:	Y2506.D
Dilution:	4.0			Initial Weight/Volume:	1044.5 mL
Analysis Date:	01/23/2013 0737			Final Weight/Volume:	1000 uL
Prep Date:	01/18/2013 1209			Injection Volume:	0.5 uL

Analyte	Result (mg/L)	Qualifier	MDL	RL
Alpha-Terpineol	ND		0.0077	0.010
Benzoic acid	0.039	J	0.038	0.050
p-Cresol	ND		0.00096	0.010
Pentachlorophenol	ND		0.077	0.077
Phenol	ND		0.0077	0.010

Surrogate	%Rec	Qualifier	Acceptance Limits
2,4,6-Tribromophenol	94	D	50 - 120
2-Fluorobiphenyl	83	D	36 - 120
2-Fluorophenol	77	D	30 - 120
Nitrobenzene-d5	79	D	45 - 120
Phenol-d5	85	D	36 - 120
Terphenyl-d14	30	D	52 - 120

**Analytical Data**

Client: Waste Management

Job Number: 280-37877-1

**Client Sample ID: DB01-E**

Lab Sample ID: 280-37877-1

Date Sampled: 01/14/2013 1258

Client Matrix: Water

Date Received: 01/17/2013 0900

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**218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved**

Analysis Method:	218.6	Analysis Batch:	440-80111	Instrument ID:	IC-16
	N/A	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	01/22/2013 1801			Final Weight/Volume:	
Prep Date:	N/A			Injection Volume:	1 uL

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Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	1.6		0.25	1.0

**Analytical Data**

Client: Waste Management

Job Number: 280-37877-1

**Client Sample ID: FLIP BUCKET**

Lab Sample ID: 280-37877-2

Date Sampled: 01/14/2013 1307

Client Matrix: Water

Date Received: 01/17/2013 0900

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**218.6 Chromium, Hexavalent (Ion Chromatography)-Dissolved**

Analysis Method:	218.6	Analysis Batch:	440-80111	Instrument ID:	IC-16
	N/A	Prep Batch:	N/A	Lab File ID:	Info
Dilution:	1.0			Initial Weight/Volume:	10 mL
Analysis Date:	01/22/2013 1814			Final Weight/Volume:	1.0 mL
Prep Date:	N/A			Injection Volume:	1 uL

Analyte	Result (ug/L)	Qualifier	MDL	RL
Chromium, hexavalent	2.0		0.25	1.0

Analytical Data

Client: Waste Management

Job Number: 280-37877-1

Client Sample ID: DB01-E

Lab Sample ID: 280-37877-1

Date Sampled: 01/14/2013 1258

Client Matrix: Water

Date Received: 01/17/2013 0900

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200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method: 200.7 Rev 4.4      Analysis Batch: 280-156608      Instrument ID: MT\_025  
Prep Method: 200.7      Prep Batch: 280-156288      Lab File ID: 25A2012113.asc  
Dilution: 1.0      Initial Weight/Volume: 50 mL  
Analysis Date: 01/21/2013 1509      Final Weight/Volume: 50 mL  
Prep Date: 01/21/2013 0830

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Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	0.0073	J	0.0044	0.015
Cadmium	0.0013	J	0.00045	0.0050
Iron	25		0.022	0.10
Lead	0.050		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.26		0.0045	0.020
Silver	ND		0.00093	0.010

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245.1 Mercury (CVAA)

Analysis Method: 245.1      Analysis Batch: 280-156661      Instrument ID: MT\_033  
Prep Method: 245.1      Prep Batch: 280-156483      Lab File ID: 130121aa.txt  
Dilution: 1.0      Initial Weight/Volume: 30 mL  
Analysis Date: 01/21/2013 1527      Final Weight/Volume: 30 mL  
Prep Date: 01/21/2013 1130

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Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.00014	J	0.000027	0.00020

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Analytical Data

Client: Waste Management

Job Number: 280-37877-1

Client Sample ID: FLIP BUCKET

Lab Sample ID: 280-37877-2

Date Sampled: 01/14/2013 1307

Client Matrix: Water

Date Received: 01/17/2013 0900

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200.7 Rev 4.4 Metals (ICP)-Total Recoverable

Analysis Method: 200.7 Rev 4.4      Analysis Batch: 280-156608      Instrument ID: MT\_025  
Prep Method: 200.7      Prep Batch: 280-156288      Lab File ID: 25A2012113.asc  
Dilution: 1.0      Initial Weight/Volume: 50 mL  
Analysis Date: 01/21/2013 1511      Final Weight/Volume: 50 mL  
Prep Date: 01/21/2013 0830

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Analyte	Result (mg/L)	Qualifier	MDL	RL
Arsenic	0.0047	J	0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	22		0.022	0.10
Lead	0.0068	J	0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	0.079		0.0045	0.020
Silver	ND		0.00093	0.010

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245.1 Mercury (CVAA)

Analysis Method: 245.1      Analysis Batch: 280-156661      Instrument ID: MT\_033  
Prep Method: 245.1      Prep Batch: 280-156483      Lab File ID: 130121aa.txt  
Dilution: 1.0      Initial Weight/Volume: 30 mL  
Analysis Date: 01/21/2013 1534      Final Weight/Volume: 30 mL  
Prep Date: 01/21/2013 1130

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Analyte	Result (mg/L)	Qualifier	MDL	RL
Mercury	0.000043	J	0.000027	0.00020

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Client: Waste Management

Job Number: 280-37877-1

General Chemistry

Client Sample ID: DB01-E

Lab Sample ID: 280-37877-1

Date Sampled: 01/14/2013 1258

Client Matrix: Water

Date Received: 01/17/2013 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	4.8	J	mg/L	1.9	5.0	1.0	1664A
	Analysis Batch: 280-157163		Analysis Date: 01/24/2013 1538				
	Prep Batch: 280-157107		Prep Date: 01/24/2013 1219				
Ammonia	0.37		mg/L	0.022	0.10	1.0	350.1
	Analysis Batch: 280-156746		Analysis Date: 01/22/2013 1216				
Nitrogen, Kjeldahl	0.67		mg/L	0.18	0.50	1.0	351.2
	Analysis Batch: 280-156999		Analysis Date: 01/23/2013 2314				
	Prep Batch: 280-156949		Prep Date: 01/23/2013 1610				
Nitrate Nitrite as N	4.7		mg/L	0.019	0.10	1.0	353.2
	Analysis Batch: 280-156933		Analysis Date: 01/23/2013 1225				
Phosphorus, Total	1.2	B	mg/L	0.010	0.050	2.0	365.1
	Analysis Batch: 280-156693		Analysis Date: 01/22/2013 1102				
	Prep Batch: 280-156507		Prep Date: 01/21/2013 1139				
Chemical Oxygen Demand	73		mg/L	4.1	20	1.0	410.4
	Analysis Batch: 280-156549		Analysis Date: 01/22/2013 1044				
Total Suspended Solids	340		mg/L	5.5	5.5	1.0	SM 2540D
	Analysis Batch: 280-156239		Analysis Date: 01/17/2013 1615				
Nitrogen, Total	5.4		mg/L	0.042	0.10	1.0	Total Nitrogen
	Analysis Batch: 280-157640		Analysis Date: 01/29/2013 0941				

Client: Waste Management

Job Number: 280-37877-1

General Chemistry

Client Sample ID: FLIP BUCKET

Lab Sample ID: 280-37877-2

Date Sampled: 01/14/2013 1307

Client Matrix: Water

Date Received: 01/17/2013 0900

Analyte	Result	Qual	Units	MDL	RL	Dil	Method
HEM	2.6	J	mg/L	1.8	5.0	1.0	1664A
	Analysis Batch: 280-157163		Analysis Date: 01/24/2013 1538				
	Prep Batch: 280-157107		Prep Date: 01/24/2013 1219				
Ammonia	0.070	J	mg/L	0.022	0.10	1.0	350.1
	Analysis Batch: 280-156746		Analysis Date: 01/22/2013 1219				
Nitrogen, Kjeldahl	0.38	J	mg/L	0.18	0.50	1.0	351.2
	Analysis Batch: 280-156999		Analysis Date: 01/23/2013 2315				
	Prep Batch: 280-156949		Prep Date: 01/23/2013 1610				
Nitrate Nitrite as N	0.78		mg/L	0.019	0.10	1.0	353.2
	Analysis Batch: 280-156933		Analysis Date: 01/23/2013 1230				
Phosphorus, Total	0.73	B	mg/L	0.0050	0.050	1.0	365.1
	Analysis Batch: 280-156693		Analysis Date: 01/22/2013 0947				
	Prep Batch: 280-156507		Prep Date: 01/21/2013 1139				
Chemical Oxygen Demand	82		mg/L	4.1	20	1.0	410.4
	Analysis Batch: 280-156549		Analysis Date: 01/22/2013 1044				
Total Suspended Solids	300		mg/L	5.5	5.5	1.0	SM 2540D
	Analysis Batch: 280-156239		Analysis Date: 01/17/2013 1615				
Nitrogen, Total	1.2		mg/L	0.042	0.10	1.0	Total Nitrogen
	Analysis Batch: 280-157640		Analysis Date: 01/29/2013 0941				

Client: Waste Management

Job Number: 280-37877-1

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**Field Service / Mobile Lab**

**Client Sample ID:** DB01-E

Lab Sample ID: 280-37877-1

Date Sampled: 01/14/2013 1258

Client Matrix: Water

Date Received: 01/17/2013 0900

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	8.97		SU	1.0	Field Sampling	280-156321	01/14/2013 1258

**Analytical Data**

Client: Waste Management

Job Number: 280-37877-1

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**Field Service / Mobile Lab**

**Client Sample ID: FLIP BUCKET**

Lab Sample ID: 280-37877-2

Date Sampled: 01/14/2013 1307

Client Matrix: Water

Date Received: 01/17/2013 0900

Analyte	Result	Qual	Units	Dil	Method	Analysis Batch	Date Analyzed Date Prepared
Field pH	9.29		SU	1.0	Field Sampling	280-156321	01/14/2013 1307

## DATA REPORTING QUALIFIERS

Client: Waste Management

Job Number: 280-37877-1

<b>Lab Section</b>	<b>Qualifier</b>	<b>Description</b>
GC/MS Semi VOA	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	D	Sample results are obtained from a dilution; the surrogate or matrix spike recoveries reported are calculated from diluted samples.
	X	Surrogate is outside control limits
Metals	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry	B	Compound was found in the blank and sample.
	F	MS/MSD Recovery or RPD exceeds the control limits
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

# QUALITY CONTROL RESULTS

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**QC Association Summary**

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>GC/MS Semi VOA</b>					
<b>Prep Batch: 280-156338</b>					
LCS 280-156338/2-A	Lab Control Sample	T	Water	625	
LCSD 280-156338/3-A	Lab Control Sample Duplicate	T	Water	625	
MB 280-156338/1-A	Method Blank	T	Water	625	
280-37877-1	DB01-E	T	Water	625	
280-37877-2	FLIP BUCKET	T	Water	625	
<b>Analysis Batch:280-156637</b>					
LCS 280-156338/2-A	Lab Control Sample	T	Water	625	280-156338
LCSD 280-156338/3-A	Lab Control Sample Duplicate	T	Water	625	280-156338
MB 280-156338/1-A	Method Blank	T	Water	625	280-156338
280-37877-1	DB01-E	T	Water	625	280-156338
280-37877-2	FLIP BUCKET	T	Water	625	280-156338

**Report Basis**

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-37877-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report		Method	Prep Batch
		Basis	Client Matrix		
<b>Metals</b>					
<b>Prep Batch: 280-156288</b>					
LCS 280-156288/2-A	Lab Control Sample	R	Water	200.7	
MB 280-156288/1-A	Method Blank	R	Water	200.7	
280-37877-1	DB01-E	R	Water	200.7	
280-37877-2	FLIP BUCKET	R	Water	200.7	
280-37922-D-1-B MS	Matrix Spike	R	Water	200.7	
280-37922-D-1-C MSD	Matrix Spike Duplicate	R	Water	200.7	
<b>Prep Batch: 280-156483</b>					
LCS 280-156483/2-A	Lab Control Sample	T	Water	245.1	
MB 280-156483/1-A	Method Blank	T	Water	245.1	
280-37877-1	DB01-E	T	Water	245.1	
280-37877-1MS	Matrix Spike	T	Water	245.1	
280-37877-1MSD	Matrix Spike Duplicate	T	Water	245.1	
280-37877-2	FLIP BUCKET	T	Water	245.1	
<b>Analysis Batch:280-156608</b>					
LCS 280-156288/2-A	Lab Control Sample	R	Water	200.7 Rev 4.4	280-156288
MB 280-156288/1-A	Method Blank	R	Water	200.7 Rev 4.4	280-156288
280-37877-1	DB01-E	R	Water	200.7 Rev 4.4	280-156288
280-37877-2	FLIP BUCKET	R	Water	200.7 Rev 4.4	280-156288
280-37922-D-1-B MS	Matrix Spike	R	Water	200.7 Rev 4.4	280-156288
280-37922-D-1-C MSD	Matrix Spike Duplicate	R	Water	200.7 Rev 4.4	280-156288
<b>Analysis Batch:280-156661</b>					
LCS 280-156483/2-A	Lab Control Sample	T	Water	245.1	280-156483
MB 280-156483/1-A	Method Blank	T	Water	245.1	280-156483
280-37877-1	DB01-E	T	Water	245.1	280-156483
280-37877-1MS	Matrix Spike	T	Water	245.1	280-156483
280-37877-1MSD	Matrix Spike Duplicate	T	Water	245.1	280-156483
280-37877-2	FLIP BUCKET	T	Water	245.1	280-156483
<b>Report Basis</b>					
R = Total Recoverable					
T = Total					
<b>Field Service / Mobile Lab</b>					
<b>Analysis Batch:280-156321</b>					
280-37877-1	DB01-E	T	Water	Field Sampling	
280-37877-2	FLIP BUCKET	T	Water	Field Sampling	

**Report Basis**

T = Total

## Quality Control Results

Client: Waste Management

Job Number: 280-37877-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-156239</b>					
LCS 280-156239/1	Lab Control Sample	T	Water	SM 2540D	
LCSD 280-156239/2	Lab Control Sample Duplicate	T	Water	SM 2540D	
MB 280-156239/3	Method Blank	T	Water	SM 2540D	
280-37877-1	DB01-E	T	Water	SM 2540D	
280-37877-1DU	Duplicate	T	Water	SM 2540D	
280-37877-2	FLIP BUCKET	T	Water	SM 2540D	
<b>Prep Batch: 280-156507</b>					
LCS 280-156507/3-A	Lab Control Sample	T	Water	365.2/365.3/365	
LCSD 280-156507/4-A	Lab Control Sample Duplicate	T	Water	365.2/365.3/365	
MB 280-156507/5-A	Method Blank	T	Water	365.2/365.3/365	
280-37877-1	DB01-E	T	Water	365.2/365.3/365	
280-37877-1MS	Matrix Spike	T	Water	365.2/365.3/365	
280-37877-1MSD	Matrix Spike Duplicate	T	Water	365.2/365.3/365	
280-37877-2	FLIP BUCKET	T	Water	365.2/365.3/365	
<b>Analysis Batch:280-156549</b>					
LCS 280-156549/3	Lab Control Sample	T	Water	410.4	
LCSD 280-156549/4	Lab Control Sample Duplicate	T	Water	410.4	
MB 280-156549/5	Method Blank	T	Water	410.4	
280-37849-A-10 MS	Matrix Spike	T	Water	410.4	
280-37849-A-10 MSD	Matrix Spike Duplicate	T	Water	410.4	
280-37877-1	DB01-E	T	Water	410.4	
280-37877-2	FLIP BUCKET	T	Water	410.4	
<b>Analysis Batch:280-156693</b>					
LCS 280-156507/3-A	Lab Control Sample	T	Water	365.1	280-156507
LCSD 280-156507/4-A	Lab Control Sample Duplicate	T	Water	365.1	280-156507
MB 280-156507/5-A	Method Blank	T	Water	365.1	280-156507
280-37877-1	DB01-E	T	Water	365.1	280-156507
280-37877-1MS	Matrix Spike	T	Water	365.1	280-156507
280-37877-1MSD	Matrix Spike Duplicate	T	Water	365.1	280-156507
280-37877-2	FLIP BUCKET	T	Water	365.1	280-156507
<b>Analysis Batch:280-156746</b>					
LCS 280-156746/54	Lab Control Sample	T	Water	350.1	
LCSD 280-156746/55	Lab Control Sample Duplicate	T	Water	350.1	
MB 280-156746/21	Method Blank	T	Water	350.1	
MB 280-156746/56	Method Blank	T	Water	350.1	
280-37851-B-1 MS	Matrix Spike	T	Water	350.1	
280-37851-B-1 MSD	Matrix Spike Duplicate	T	Water	350.1	
280-37877-1	DB01-E	T	Water	350.1	
280-37877-2	FLIP BUCKET	T	Water	350.1	

## Quality Control Results

Client: Waste Management

Job Number: 280-37877-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
<b>General Chemistry</b>					
<b>Analysis Batch:280-156933</b>					
LCS 280-156933/21	Lab Control Sample	T	Water	353.2	
LCSD 280-156933/22	Lab Control Sample Duplicate	T	Water	353.2	
MB 280-156933/20	Method Blank	T	Water	353.2	
280-37877-1	DB01-E	T	Water	353.2	
280-37877-1MS	Matrix Spike	T	Water	353.2	
280-37877-1MSD	Matrix Spike Duplicate	T	Water	353.2	
280-37877-2	FLIP BUCKET	T	Water	353.2	
<b>Prep Batch: 280-156949</b>					
LCS 280-156949/1-A	Lab Control Sample	T	Water	351.2	
LCSD 280-156949/2-A	Lab Control Sample Duplicate	T	Water	351.2	
MB 280-156949/3-A	Method Blank	T	Water	351.2	
280-37809-A-2-C MS	Matrix Spike	T	Water	351.2	
280-37809-A-2-D MSD	Matrix Spike Duplicate	T	Water	351.2	
280-37877-1	DB01-E	T	Water	351.2	
280-37877-2	FLIP BUCKET	T	Water	351.2	
<b>Analysis Batch:280-156999</b>					
LCS 280-156949/1-A	Lab Control Sample	T	Water	351.2	280-156949
LCSD 280-156949/2-A	Lab Control Sample Duplicate	T	Water	351.2	280-156949
MB 280-156949/3-A	Method Blank	T	Water	351.2	280-156949
280-37809-A-2-C MS	Matrix Spike	T	Water	351.2	280-156949
280-37809-A-2-D MSD	Matrix Spike Duplicate	T	Water	351.2	280-156949
280-37877-1	DB01-E	T	Water	351.2	280-156949
280-37877-2	FLIP BUCKET	T	Water	351.2	280-156949
<b>Prep Batch: 280-157107</b>					
LCS 280-157107/2-A	Lab Control Sample	T	Water	1664A	
LCSD 280-157107/3-A	Lab Control Sample Duplicate	T	Water	1664A	
MB 280-157107/1-A	Method Blank	T	Water	1664A	
280-37877-1	DB01-E	T	Water	1664A	
280-37877-2	FLIP BUCKET	T	Water	1664A	
<b>Analysis Batch:280-157163</b>					
LCS 280-157107/2-A	Lab Control Sample	T	Water	1664A	280-157107
LCSD 280-157107/3-A	Lab Control Sample Duplicate	T	Water	1664A	280-157107
MB 280-157107/1-A	Method Blank	T	Water	1664A	280-157107
280-37877-1	DB01-E	T	Water	1664A	280-157107
280-37877-2	FLIP BUCKET	T	Water	1664A	280-157107
<b>Analysis Batch:280-157640</b>					
MB 280-157640/1	Method Blank	T	Water	Total Nitrogen	
280-37877-1	DB01-E	T	Water	Total Nitrogen	
280-37877-2	FLIP BUCKET	T	Water	Total Nitrogen	

Quality Control Results

Client: Waste Management

Job Number: 280-37877-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
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**Report Basis**

T = Total

**HPLC/IC**

**Analysis Batch:440-80111**

LCS 440-80111/2	Lab Control Sample	T	Water	218.6	
MB 440-80111/3	Method Blank	T	Water	218.6	
280-37877-1	DB01-E	D	Water	218.6	
280-37877-2	FLIP BUCKET	D	Water	218.6	
280-37877-2MS	Matrix Spike	D	Water	218.6	
280-37877-2MSD	Matrix Spike Duplicate	D	Water	218.6	

**Report Basis**

D = Dissolved

T = Total

Client: Waste Management

Job Number: 280-37877-1

**Surrogate Recovery Report**

**625 Semivolatile Organic Compounds (GC/MS)**

**Client Matrix: Water**

Lab Sample ID	Client Sample ID	TBP %Rec	FBP %Rec	2FP %Rec	NBZ %Rec	PHL %Rec	TPH %Rec
280-37877-1	DB01-E	95	68	65	74	73	33X
280-37877-2	FLIP BUCKET	94D	83D	77D	79D	85D	30D
MB 280-156338/1-A		84	57	74	77	78	88
LCS 280-156338/2-A		99	71	71	78	76	90
LCSD 280-156338/3-A		99	73	80	85	84	88

Surrogate	Acceptance Limits
TBP = 2,4,6-Tribromophenol	50-120
FBP = 2-Fluorobiphenyl	36-120
2FP = 2-Fluorophenol	30-120
NBZ = Nitrobenzene-d5	45-120
PHL = Phenol-d5	36-120
TPH = Terphenyl-d14	52-120

## Quality Control Results

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 280-156338**

**Method: 625  
Preparation: 625**

Lab Sample ID: MB 280-156338/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 0009  
 Prep Date: 01/18/2013 1209  
 Leach Date: N/A

Analysis Batch: 280-156637  
 Prep Batch: 280-156338  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: SMS\_Y  
 Lab File ID: Y2492.D  
 Initial Weight/Volume: 1000 mL  
 Final Weight/Volume: 1000 uL  
 Injection Volume: 0.5 uL

Analyte	Result	Qual	MDL	RL
Alpha-Terpineol	ND		0.0020	0.010
Benzoic acid	ND		0.010	0.050
p-Cresol	ND		0.00025	0.010
Pentachlorophenol	ND		0.020	0.060
Phenol	ND		0.0020	0.010

Surrogate	% Rec	Acceptance Limits
2,4,6-Tribromophenol	84	50 - 120
2-Fluorobiphenyl	57	36 - 120
2-Fluorophenol	74	30 - 120
Nitrobenzene-d5	77	45 - 120
Phenol-d5	78	36 - 120
Terphenyl-d14	88	52 - 120

## Quality Control Results

Client: Waste Management

Job Number: 280-37877-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-156338**

**Method: 625  
Preparation: 625**

LCS Lab Sample ID: LCS 280-156338/2-A	Analysis Batch: 280-156637	Instrument ID: SMS_Y
Client Matrix: Water	Prep Batch: 280-156338	Lab File ID: Y2456.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 1000 mL
Analysis Date: 01/22/2013 1133	Units: mg/L	Final Weight/Volume: 1000 uL
Prep Date: 01/18/2013 1209		Injection Volume: 0.5 uL
Leach Date: N/A		

LCSD Lab Sample ID: LCSD 280-156338/3-A	Analysis Batch: 280-156637	Instrument ID: SMS_Y
Client Matrix: Water	Prep Batch: 280-156338	Lab File ID: Y2457.D
Dilution: 1.0	Leach Batch: N/A	Initial Weight/Volume: 1000 mL
Analysis Date: 01/22/2013 1155	Units: mg/L	Final Weight/Volume: 1000 uL
Prep Date: 01/18/2013 1209		Injection Volume: 0.5 uL
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
1,2,4-Trichlorobenzene	64	71	44 - 120	10	35		
1,2-Dichlorobenzene	59	67	32 - 120	13	42		
1,3-Dichlorobenzene	58	66	23 - 120	14	47		
1,4-Dichlorobenzene	57	65	24 - 120	14	49		
2,2'-Oxybis(1-chloropropane)	70	79	37 - 120	12	30		
2,4,6-Trichlorophenol	87	93	51 - 120	7	30		
2,4-Dichlorophenol	80	88	46 - 120	9	30		
2,4-Dimethylphenol	67	72	44 - 119	7	35		
2,4-Dinitrophenol	92	94	20 - 121	2	61		
2,4-Dinitrotoluene	97	101	57 - 120	4	35		
2,6-Dinitrotoluene	92	93	56 - 120	1	30		
2-Chloronaphthalene	77	80	60 - 118	4	30		
2-Chlorophenol	75	84	34 - 120	11	30		
2-Methylphenol	74	83	38 - 120	12	35		
2-Nitrophenol	84	93	47 - 120	10	30		
3,3'-Dichlorobenzidine	71	73	18 - 120	3	50		
4,6-Dinitro-2-methylphenol	100	102	40 - 120	2	55		
4-Bromophenyl phenyl ether	88	89	53 - 120	2	34		
4-Chloro-3-methylphenol	86	92	57 - 120	6	30		
4-Chlorophenyl phenyl ether	86	88	51 - 120	2	30		
4-Nitrophenol	103	105	53 - 120	2	42		
Acenaphthene	81	83	47 - 120	3	30		
Acenaphthylene	82	85	33 - 120	4	30		
Anthracene	88	87	52 - 120	1	30		
Benzidine	80	83	10 - 218	4	50		
Benzo[a]anthracene	88	88	54 - 120	1	30		
Benzo[a]pyrene	77	76	39 - 120	1	73		
Benzo[b]fluoranthene	86	84	51 - 120	2	90		
Benzo[g,h,i]perylene	92	93	48 - 120	1	64		
Benzo[k]fluoranthene	89	91	49 - 120	2	50		
Bis(2-chloroethoxy)methane	77	85	50 - 120	9	30		
Bis(2-chloroethyl)ether	76	85	35 - 120	12	30		
Bis(2-ethylhexyl) phthalate	96	97	56 - 120	2	30		
Butyl benzyl phthalate	92	93	53 - 120	1	30		
Chrysene	91	93	51 - 120	2	30		
Dibenz(a,h)anthracene	92	91	45 - 120	1	78		

Quality Control Results

Client: Waste Management

Job Number: 280-37877-1

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-156338**

**Method: 625  
Preparation: 625**

LCS Lab Sample ID:	LCS 280-156338/2-A	Analysis Batch:	280-156637	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-156338	Lab File ID:	Y2456.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/22/2013 1133	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/18/2013 1209			Injection Volume:	0.5 uL
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-156338/3-A	Analysis Batch:	280-156637	Instrument ID:	SMS_Y
Client Matrix:	Water	Prep Batch:	280-156338	Lab File ID:	Y2457.D
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/22/2013 1155	Units:	mg/L	Final Weight/Volume:	1000 uL
Prep Date:	01/18/2013 1209			Injection Volume:	0.5 uL
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Diethyl phthalate	90	91	59 - 114	1	30		
Dimethyl phthalate	89	91	58 - 112	2	30		
Di-n-butyl phthalate	93	92	57 - 118	1	30		
Di-n-octyl phthalate	91	91	56 - 120	1	30		
Fluoranthene	92	92	58 - 120	0	30		
Fluorene	84	87	59 - 120	4	30		
Hexachlorobenzene	89	89	53 - 120	0	30		
Hexachlorobutadiene	57	65	27 - 116	13	41		
Hexachlorocyclopentadiene	19	19	10 - 120	1	82	J	J
Hexachloroethane	56	63	40 - 113	13	52		
Indeno[1,2,3-cd]pyrene	89	89	50 - 120	1	73		
Isophorone	81	88	50 - 120	8	30		
Naphthalene	69	76	37 - 120	9	30		
Nitrobenzene	78	86	46 - 120	10	30		
N-Nitrosodimethylamine	71	81	37 - 120	13	30		
N-Nitrosodi-n-propylamine	78	86	50 - 120	10	30		
N-Nitrosodiphenylamine	86	87	46 - 203	2	50		
p-Cresol	75	83	42 - 120	11	39		
Pentachlorophenol	92	93	46 - 120	1	30		
Phenanthrene	89	87	54 - 120	1	30		
Phenol	77	88	37 - 112	13	30		
Pyrene	89	89	55 - 115	0	30		

Surrogate	LCS % Rec	LCSD % Rec	Acceptance Limits
2,4,6-Tribromophenol	99	99	50 - 120
2-Fluorobiphenyl	71	73	36 - 120
2-Fluorophenol	71	80	30 - 120
Nitrobenzene-d5	78	85	45 - 120
Phenol-d5	76	84	36 - 120
Terphenyl-d14	90	88	52 - 120

## Quality Control Results

Client: Waste Management

Job Number: 280-37877-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-156338**

**Method: 625  
Preparation: 625**

LCS Lab Sample ID: LCS 280-156338/2-A      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1133  
 Prep Date: 01/18/2013 1209  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-156338/3-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1155  
 Prep Date: 01/18/2013 1209  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
1,2,4-Trichlorobenzene	0.0800	0.0800	0.0509	0.0565
1,2-Dichlorobenzene	0.0800	0.0800	0.0474	0.0540
1,3-Dichlorobenzene	0.0800	0.0800	0.0461	0.0532
1,4-Dichlorobenzene	0.0800	0.0800	0.0454	0.0523
2,2'-Oxybis(1-chloropropane)	0.0800	0.0800	0.0560	0.0630
2,4,6-Trichlorophenol	0.0800	0.0800	0.0695	0.0744
2,4-Dichlorophenol	0.0800	0.0800	0.0638	0.0702
2,4-Dimethylphenol	0.0800	0.0800	0.0538	0.0579
2,4-Dinitrophenol	0.0800	0.0800	0.0735	0.0752
2,4-Dinitrotoluene	0.0800	0.0800	0.0780	0.0808
2,6-Dinitrotoluene	0.0800	0.0800	0.0739	0.0744
2-Chloronaphthalene	0.0800	0.0800	0.0614	0.0641
2-Chlorophenol	0.0800	0.0800	0.0600	0.0669
2-Methylphenol	0.0800	0.0800	0.0589	0.0665
2-Nitrophenol	0.0800	0.0800	0.0673	0.0744
3,3'-Dichlorobenzidine	0.0800	0.0800	0.0565	0.0582
4,6-Dinitro-2-methylphenol	0.0800	0.0800	0.0798	0.0814
4-Bromophenyl phenyl ether	0.0800	0.0800	0.0701	0.0713
4-Chloro-3-methylphenol	0.0800	0.0800	0.0687	0.0733
4-Chlorophenyl phenyl ether	0.0800	0.0800	0.0685	0.0702
4-Nitrophenol	0.0800	0.0800	0.0824	0.0838
Acenaphthene	0.0800	0.0800	0.0644	0.0664
Acenaphthylene	0.0800	0.0800	0.0658	0.0682
Anthracene	0.0800	0.0800	0.0703	0.0697
Benzidine	0.200	0.200	0.159	0.165
Benzo[a]anthracene	0.0800	0.0800	0.0701	0.0707
Benzo[a]pyrene	0.0800	0.0800	0.0617	0.0611
Benzo[b]fluoranthene	0.0800	0.0800	0.0688	0.0676
Benzo[g,h,i]perylene	0.0800	0.0800	0.0738	0.0745
Benzo[k]fluoranthene	0.0800	0.0800	0.0714	0.0728
Bis(2-chloroethoxy)methane	0.0800	0.0800	0.0619	0.0679
Bis(2-chloroethyl)ether	0.0800	0.0800	0.0607	0.0683
Bis(2-ethylhexyl) phthalate	0.0800	0.0800	0.0765	0.0778
Butyl benzyl phthalate	0.0800	0.0800	0.0733	0.0743
Chrysene	0.0800	0.0800	0.0730	0.0743
Dibenz(a,h)anthracene	0.0800	0.0800	0.0735	0.0724
Diethyl phthalate	0.0800	0.0800	0.0723	0.0730
Dimethyl phthalate	0.0800	0.0800	0.0716	0.0730
Di-n-butyl phthalate	0.0800	0.0800	0.0746	0.0736

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-156338**

**Method: 625  
Preparation: 625**

LCS Lab Sample ID: LCS 280-156338/2-A      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1133  
 Prep Date: 01/18/2013 1209  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-156338/3-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1155  
 Prep Date: 01/18/2013 1209  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Di-n-octyl phthalate	0.0800	0.0800	0.0727	0.0732
Fluoranthene	0.0800	0.0800	0.0738	0.0739
Fluorene	0.0800	0.0800	0.0671	0.0696
Hexachlorobenzene	0.0800	0.0800	0.0710	0.0713
Hexachlorobutadiene	0.0800	0.0800	0.0456	0.0518
Hexachlorocyclopentadiene	0.0800	0.0800	0.0156    J	0.0155    J
Hexachloroethane	0.0800	0.0800	0.0446	0.0507
Indeno[1,2,3-cd]pyrene	0.0800	0.0800	0.0716	0.0709
Isophorone	0.0800	0.0800	0.0651	0.0705
Naphthalene	0.0800	0.0800	0.0551	0.0606
Nitrobenzene	0.0800	0.0800	0.0622	0.0686
N-Nitrosodimethylamine	0.0800	0.0800	0.0569	0.0646
N-Nitrosodi-n-propylamine	0.0800	0.0800	0.0622	0.0687
N-Nitrosodiphenylamine	0.0683	0.0683	0.0585	0.0597
p-Cresol	0.160	0.160	0.120	0.133
Pentachlorophenol	0.0800	0.0800	0.0737	0.0746
Phenanthrene	0.0800	0.0800	0.0709	0.0700
Phenol	0.0800	0.0800	0.0613	0.0700
Pyrene	0.0800	0.0800	0.0712	0.0711

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 440-80111**

Lab Sample ID: MB 440-80111/3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 0658  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 440-80111  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

**Method: 218.6  
 Preparation: N/A**

Instrument ID: IC-16  
 Lab File ID: Info 2\_TAIIRV167\_Hex  
 Initial Weight/Volume: 10 mL  
 Final Weight/Volume:  
 Injection Volume: 1 uL

Analyte	Result	Qual	MDL	RL
Chromium, hexavalent	ND		0.25	1.0

**Lab Control Sample - Batch: 440-80111**

Lab Sample ID: LCS 440-80111/2  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 0646  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 440-80111  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: ug/L

**Method: 218.6  
 Preparation: N/A**

Instrument ID: IC-16  
 Lab File ID: Info 2\_TAIIRV167\_Hex  
 Initial Weight/Volume: 10 mL  
 Final Weight/Volume:  
 Injection Volume: 1 uL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Chromium, hexavalent	50.0	46.8	94	90 - 110	

**Matrix Spike/  
 Matrix Spike Duplicate Recovery Report - Batch: 440-80111**

**Method: 218.6  
 Preparation: N/A**

MS Lab Sample ID: 280-37877-2  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1826  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 440-80111  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: IC-16  
 Lab File ID: Info 2\_TAIIRV167\_Hex  
 Initial Weight/Volume: 10 mL  
 Final Weight/Volume:  
 Injection Volume: 1 uL

MSD Lab Sample ID: 280-37877-2  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1839  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 440-80111  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: IC-16  
 Lab File ID: Info 2\_TAIIRV167\_Hex  
 Initial Weight/Volume: 10 mL  
 Final Weight/Volume:  
 Injection Volume: 1 uL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chromium, hexavalent	102	100	90 - 110	2	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 440-80111**

**Method: 218.6  
Preparation: N/A**

MS Lab Sample ID: 280-37877-2                      Units: ug/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1826  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-37877-2  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1839  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chromium, hexavalent	2.0	50.0	50.0	53.0	51.9

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 280-156288**

Lab Sample ID: MB 280-156288/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/21/2013 1451  
 Prep Date: 01/21/2013 0830  
 Leach Date: N/A

Analysis Batch: 280-156608  
 Prep Batch: 280-156288  
 Leach Batch: N/A  
 Units: mg/L

**Method: 200.7 Rev 4.4  
 Preparation: 200.7  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A2012113.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Result	Qual	MDL	RL
Arsenic	ND		0.0044	0.015
Cadmium	ND		0.00045	0.0050
Iron	ND		0.022	0.10
Lead	ND		0.0026	0.0090
Selenium	ND		0.0049	0.015
Zinc	ND		0.0045	0.020
Silver	ND		0.00093	0.010

**Lab Control Sample - Batch: 280-156288**

Lab Sample ID: LCS 280-156288/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/21/2013 1453  
 Prep Date: 01/21/2013 0830  
 Leach Date: N/A

Analysis Batch: 280-156608  
 Prep Batch: 280-156288  
 Leach Batch: N/A  
 Units: mg/L

**Method: 200.7 Rev 4.4  
 Preparation: 200.7  
 Total Recoverable**

Instrument ID: MT\_025  
 Lab File ID: 25A2012113.asc  
 Initial Weight/Volume: 50 mL  
 Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	1.00	0.993	99	88 - 110	
Cadmium	0.100	0.101	101	88 - 111	
Iron	1.00	1.01	101	89 - 115	
Lead	0.500	0.503	101	89 - 110	
Selenium	2.00	1.97	98	85 - 112	
Zinc	0.500	0.504	101	85 - 111	
Silver	0.0500	0.0530	106	85 - 115	

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156288**

**Method: 200.7 Rev 4.4  
Preparation: 200.7  
Total Recoverable**

MS Lab Sample ID: 280-37922-D-1-B MS  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 01/21/2013 1500  
Prep Date: 01/21/2013 0830  
Leach Date: N/A

Analysis Batch: 280-156608  
Prep Batch: 280-156288  
Leach Batch: N/A

Instrument ID: MT\_025  
Lab File ID: 25A2012113.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 280-37922-D-1-C MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 01/21/2013 1502  
Prep Date: 01/21/2013 0830  
Leach Date: N/A

Analysis Batch: 280-156608  
Prep Batch: 280-156288  
Leach Batch: N/A

Instrument ID: MT\_025  
Lab File ID: 25A2012113.asc  
Initial Weight/Volume: 50 mL  
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Arsenic	98	99	88 - 110	1	20		
Cadmium	100	101	88 - 111	1	20		
Iron	109	106	89 - 115	2	20		
Lead	99	100	89 - 110	0	20		
Selenium	97	98	85 - 112	1	20		
Zinc	100	100	85 - 111	0	20		
Silver	105	107	85 - 115	2	20		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156288**

**Method: 200.7 Rev 4.4  
Preparation: 200.7  
Total Recoverable**

MS Lab Sample ID: 280-37922-D-1-B MS Units: mg/L  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 01/21/2013 1500  
Prep Date: 01/21/2013 0830  
Leach Date: N/A

MSD Lab Sample ID: 280-37922-D-1-C MSD  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 01/21/2013 1502  
Prep Date: 01/21/2013 0830  
Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Arsenic	ND	1.00	1.00	0.982	0.993
Cadmium	ND	0.100	0.100	0.100	0.101
Iron	0.46	1.00	1.00	1.55	1.52
Lead	0.078	0.500	0.500	0.574	0.576
Selenium	ND	2.00	2.00	1.93	1.96
Zinc	0.11	0.500	0.500	0.608	0.611
Silver	ND	0.0500	0.0500	0.0525	0.0535

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 280-156483**

**Method: 245.1  
Preparation: 245.1**

Lab Sample ID:	MB 280-156483/1-A	Analysis Batch:	280-156661	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-156483	Lab File ID:	130121aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/21/2013 1513	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	01/21/2013 1130				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Mercury	ND		0.000027	0.00020

**Lab Control Sample - Batch: 280-156483**

**Method: 245.1  
Preparation: 245.1**

Lab Sample ID:	LCS 280-156483/2-A	Analysis Batch:	280-156661	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-156483	Lab File ID:	130121aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/21/2013 1520	Units:	mg/L	Final Weight/Volume:	30 mL
Prep Date:	01/21/2013 1130				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	0.00500	0.00494	99	90 - 110	

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156483**

**Method: 245.1  
Preparation: 245.1**

MS Lab Sample ID:	280-37877-1	Analysis Batch:	280-156661	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-156483	Lab File ID:	130121aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/21/2013 1529			Final Weight/Volume:	30 mL
Prep Date:	01/21/2013 1130				
Leach Date:	N/A				

MSD Lab Sample ID:	280-37877-1	Analysis Batch:	280-156661	Instrument ID:	MT_033
Client Matrix:	Water	Prep Batch:	280-156483	Lab File ID:	130121aa.txt
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	30 mL
Analysis Date:	01/21/2013 1531			Final Weight/Volume:	30 mL
Prep Date:	01/21/2013 1130				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Mercury	97	97	80 - 120	1	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156483**

**Method: 245.1  
Preparation: 245.1**

MS Lab Sample ID: 280-37877-1                      Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/21/2013 1529  
 Prep Date: 01/21/2013 1130  
 Leach Date: N/A

MSD Lab Sample ID: 280-37877-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/21/2013 1531  
 Prep Date: 01/21/2013 1130  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Mercury	0.00014    J	0.00500	0.00500	0.00498	0.00501

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 280-157107**

**Method: 1664A  
Preparation: 1664A**

Lab Sample ID:	MB 280-157107/1-A	Analysis Batch:	280-157163	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-157107	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2013 1538	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/24/2013 1219				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
HEM	ND		1.4	5.0

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-157107**

**Method: 1664A  
Preparation: 1664A**

LCS Lab Sample ID:	LCS 280-157107/2-A	Analysis Batch:	280-157163	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-157107	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2013 1538	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/24/2013 1219				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-157107/3-A	Analysis Batch:	280-157163	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	280-157107	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	1000 mL
Analysis Date:	01/24/2013 1538	Units:	mg/L	Final Weight/Volume:	1000 mL
Prep Date:	01/24/2013 1219				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
HEM	101	84	81 - 107	18	22		

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-157107**

**Method: 1664A  
Preparation: 1664A**

LCS Lab Sample ID:	LCS 280-157107/2-A	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-157107/3-A
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/24/2013 1538			Analysis Date:	01/24/2013 1538
Prep Date:	01/24/2013 1219			Prep Date:	01/24/2013 1219
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
HEM	40.0	40.0	40.3	33.6

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 280-156746**

**Method: 350.1  
Preparation: N/A**

Lab Sample ID: MB 280-156746/21  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 01/22/2013 1011  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-156746  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_Alph 3  
Lab File ID: E:\FLOW\_4\012213.RS  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

**Method Blank - Batch: 280-156746**

**Method: 350.1  
Preparation: N/A**

Lab Sample ID: MB 280-156746/56  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 01/22/2013 1141  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-156746  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_Alph 3  
Lab File ID: E:\FLOW\_4\012213.RS  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	Result	Qual	MDL	RL
Ammonia	ND		0.022	0.10

**Lab Control Sample/  
Lab Control Sample Duplicate Recovery Report - Batch: 280-156746**

**Method: 350.1  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-156746/54  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 01/22/2013 1137  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-156746  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_Alph 3  
Lab File ID: E:\FLOW\_4\012213.RS  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-156746/55  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 01/22/2013 1139  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-156746  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: WC\_Alph 3  
Lab File ID: E:\FLOW\_4\012213.RS  
Initial Weight/Volume: 100 mL  
Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Ammonia	107	107	90 - 110	0	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-156746**

**Method: 350.1  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-156746/54 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1137  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-156746/55  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1139  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Ammonia	2.50	2.50	2.67	2.67

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156746**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-37851-B-1 MS  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1146  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-156746  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_Alp 3  
 Lab File ID: E:\FLOW\_4\012213.RS  
 Initial Weight/Volume: 20 mL  
 Final Weight/Volume: 20 mL

MSD Lab Sample ID: 280-37851-B-1 MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1148  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-156746  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_Alp 3  
 Lab File ID: E:\FLOW\_4\012213.RS  
 Initial Weight/Volume: 20 mL  
 Final Weight/Volume: 20 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Ammonia	110	110	90 - 110	1	10		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156746**

**Method: 350.1  
Preparation: N/A**

MS Lab Sample ID: 280-37851-B-1 MS Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1146  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-37851-B-1 MSD  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 1148  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Ammonia	ND	1.00	1.00	1.10	1.10

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 280-156949**

Lab Sample ID: MB 280-156949/3-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 2246  
 Prep Date: 01/23/2013 1610  
 Leach Date: N/A

Analysis Batch: 280-156999  
 Prep Batch: 280-156949  
 Leach Batch: N/A  
 Units: mg/L

**Method: 351.2  
 Preparation: 351.2**

Instrument ID: WC\_Astoria  
 Lab File ID: 012313TKN.tab  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

Analyte	Result	Qual	MDL	RL
Nitrogen, Kjeldahl	ND		0.18	0.50

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-156949**

**Method: 351.2  
 Preparation: 351.2**

LCS Lab Sample ID: LCS 280-156949/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 2244  
 Prep Date: 01/23/2013 1610  
 Leach Date: N/A

Analysis Batch: 280-156999  
 Prep Batch: 280-156949  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Astoria  
 Lab File ID: 012313TKN.tab  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

LCSD Lab Sample ID: LCSD 280-156949/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 2245  
 Prep Date: 01/23/2013 1610  
 Leach Date: N/A

Analysis Batch: 280-156999  
 Prep Batch: 280-156949  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Astoria  
 Lab File ID: 012313TKN.tab  
 Initial Weight/Volume: 25 mL  
 Final Weight/Volume: 25 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Nitrogen, Kjeldahl	97	97	90 - 110	0	25		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-156949**

**Method: 351.2  
 Preparation: 351.2**

LCS Lab Sample ID: LCS 280-156949/1-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 2244  
 Prep Date: 01/23/2013 1610  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-156949/2-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 2245  
 Prep Date: 01/23/2013 1610  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrogen, Kjeldahl	6.00	6.00	5.80	5.83

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156949**

**Method: 351.2  
Preparation: 351.2**

MS Lab Sample ID:	280-37809-A-2-C MS	Analysis Batch:	280-156999	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-156949	Lab File ID:	012313TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2013 2249			Final Weight/Volume:	25 mL
Prep Date:	01/23/2013 1610				
Leach Date:	N/A				

MSD Lab Sample ID:	280-37809-A-2-D MSD	Analysis Batch:	280-156999	Instrument ID:	WC_Astoria
Client Matrix:	Water	Prep Batch:	280-156949	Lab File ID:	012313TKN.tab
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	25 mL
Analysis Date:	01/23/2013 2250			Final Weight/Volume:	25 mL
Prep Date:	01/23/2013 1610				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Nitrogen, Kjeldahl	136	142	90 - 110	3	25	F	F

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156949**

**Method: 351.2  
Preparation: 351.2**

MS Lab Sample ID:	280-37809-A-2-C MS	Units:	mg/L	MSD Lab Sample ID:	280-37809-A-2-D MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/23/2013 2249			Analysis Date:	01/23/2013 2250
Prep Date:	01/23/2013 1610			Prep Date:	01/23/2013 1610
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrogen, Kjeldahl	3.5	3.00	3.00	7.54 F	7.73 F

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 280-156933**

**Method: 353.2**  
**Preparation: N/A**

Lab Sample ID:	MB 280-156933/20	Analysis Batch:	280-156933	Instrument ID:	WC_Alph 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0123NXN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	
Analysis Date:	01/23/2013 1218	Units:	mg/L	Final Weight/Volume:	
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Nitrate Nitrite as N	ND		0.019	0.10

**Method Reporting Limit Check - Batch: 280-156933**

**Method: 353.2**  
**Preparation: N/A**

Lab Sample ID:	MRL 280-156933/18	Analysis Batch:	280-156933	Instrument ID:	WC_Alph 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0123NXN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/23/2013 1215	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Nitrate Nitrite as N	0.100	0.0922	92	50 - 150	J

**Lab Control Sample/**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-156933**

**Method: 353.2**  
**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-156933/21	Analysis Batch:	280-156933	Instrument ID:	WC_Alph 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0123NXN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/23/2013 1219	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-156933/22	Analysis Batch:	280-156933	Instrument ID:	WC_Alph 2
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	C:\FLOW_4\0123NXN
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/23/2013 1221	Units:	mg/L	Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Nitrate Nitrite as N	101	101	90 - 110	0	10		

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Laboratory Control/  
Laboratory Duplicate Data Report - Batch: 280-156933**

**Method: 353.2  
Preparation: N/A**

LCS Lab Sample ID: LCS 280-156933/21 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 1219  
 Prep Date: N/A  
 Leach Date: N/A

LCSD Lab Sample ID: LCSD 280-156933/22  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 1221  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Nitrate Nitrite as N	5.00	5.00	5.06	5.07

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156933**

**Method: 353.2  
Preparation: N/A**

MS Lab Sample ID: 280-37877-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 1227  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-156933  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_Alp 2  
 Lab File ID: C:\FLOW\_4\0123NXN  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

MSD Lab Sample ID: 280-37877-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 1228  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-156933  
 Prep Batch: N/A  
 Leach Batch: N/A

Instrument ID: WC\_Alp 2  
 Lab File ID: C:\FLOW\_4\0123NXN  
 Initial Weight/Volume: 5 mL  
 Final Weight/Volume: 5 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Nitrate Nitrite as N	95	98	90 - 110	1	10		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156933**

**Method: 353.2  
Preparation: N/A**

MS Lab Sample ID: 280-37877-1 Units: mg/L  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 1227  
 Prep Date: N/A  
 Leach Date: N/A

MSD Lab Sample ID: 280-37877-1  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/23/2013 1228  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Nitrate Nitrite as N	4.7	4.00	4.00	8.48	8.60

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 280-156507**

Lab Sample ID: MB 280-156507/5-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 0913  
 Prep Date: 01/21/2013 1139  
 Leach Date: N/A

Analysis Batch: 280-156693  
 Prep Batch: 280-156507  
 Leach Batch: N/A  
 Units: mg/L

**Method: 365.1**

**Preparation: 365.2/365.3/365**

Instrument ID: WC\_Konelab  
 Lab File ID: 012213tphos.xls  
 Initial Weight/Volume: 50.0 mL  
 Final Weight/Volume: 50.0 mL

Analyte	Result	Qual	MDL	RL
Phosphorus, Total	0.00963	J	0.0050	0.050

**Lab Control Sample/**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-156507**

**Method: 365.1**

**Preparation: 365.2/365.3/365**

LCS Lab Sample ID: LCS 280-156507/3-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 0913  
 Prep Date: 01/21/2013 1139  
 Leach Date: N/A

Analysis Batch: 280-156693  
 Prep Batch: 280-156507  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Konelab  
 Lab File ID: 012213tphos.xls  
 Initial Weight/Volume: 50.0 mL  
 Final Weight/Volume: 50.0 mL

LCSD Lab Sample ID: LCSD 280-156507/4-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 0913  
 Prep Date: 01/21/2013 1139  
 Leach Date: N/A

Analysis Batch: 280-156693  
 Prep Batch: 280-156507  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_Konelab  
 Lab File ID: 012213tphos.xls  
 Initial Weight/Volume: 50.0 mL  
 Final Weight/Volume: 50.0 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Phosphorus, Total	100	99	90 - 110	1	10		

**Laboratory Control/**

**Laboratory Duplicate Data Report - Batch: 280-156507**

**Method: 365.1**

**Preparation: 365.2/365.3/365**

LCS Lab Sample ID: LCS 280-156507/3-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 0913  
 Prep Date: 01/21/2013 1139  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-156507/4-A  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/22/2013 0913  
 Prep Date: 01/21/2013 1139  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Phosphorus, Total	0.500	0.500	0.499	0.496

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156507**

**Method: 365.1  
Preparation: 365.2/365.3/365**

MS Lab Sample ID: 280-37877-1	Analysis Batch: 280-156693	Instrument ID: WC_Konelab
Client Matrix: Water	Prep Batch: 280-156507	Lab File ID: 012213tphos.xls
Dilution: 2.0	Leach Batch: N/A	Initial Weight/Volume: 50.0 mL
Analysis Date: 01/22/2013 1102		Final Weight/Volume: 50.0 mL
Prep Date: 01/21/2013 1139		
Leach Date: N/A		

MSD Lab Sample ID: 280-37877-1	Analysis Batch: 280-156693	Instrument ID: WC_Konelab
Client Matrix: Water	Prep Batch: 280-156507	Lab File ID: 012213tphos.xls
Dilution: 2.0	Leach Batch: N/A	Initial Weight/Volume: 50.0 mL
Analysis Date: 01/22/2013 1102		Final Weight/Volume: 50.0 mL
Prep Date: 01/21/2013 1139		
Leach Date: N/A		

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Phosphorus, Total	75	97	90 - 110	6	10	F	

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156507**

**Method: 365.1  
Preparation: 365.2/365.3/365**

MS Lab Sample ID: 280-37877-1	Units: mg/L	MSD Lab Sample ID: 280-37877-1
Client Matrix: Water		Client Matrix: Water
Dilution: 2.0		Dilution: 2.0
Analysis Date: 01/22/2013 1102		Analysis Date: 01/22/2013 1102
Prep Date: 01/21/2013 1139		Prep Date: 01/21/2013 1139
Leach Date: N/A		Leach Date: N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Phosphorus, Total	1.2	0.500	0.500	1.62 F	1.73

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 280-156549**

Lab Sample ID: MB 280-156549/5  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/21/2013 1500  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-156549  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

**Method: 410.4  
 Preparation: N/A**

Instrument ID: WC\_HACH SPEC  
 Lab File ID: N/A  
 Initial Weight/Volume: 2 mL  
 Final Weight/Volume: 2 mL

Analyte	Result	Qual	MDL	RL
Chemical Oxygen Demand	ND		4.1	20

**Lab Control Sample/  
 Lab Control Sample Duplicate Recovery Report - Batch: 280-156549**

**Method: 410.4  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-156549/3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/21/2013 1500  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-156549  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_HACH SPEC  
 Lab File ID: N/A  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

LCSD Lab Sample ID: LCSD 280-156549/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/21/2013 1500  
 Prep Date: N/A  
 Leach Date: N/A

Analysis Batch: 280-156549  
 Prep Batch: N/A  
 Leach Batch: N/A  
 Units: mg/L

Instrument ID: WC\_HACH SPEC  
 Lab File ID: N/A  
 Initial Weight/Volume: 100 mL  
 Final Weight/Volume: 100 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Chemical Oxygen Demand	99	100	90 - 110	1	11		

**Laboratory Control/  
 Laboratory Duplicate Data Report - Batch: 280-156549**

**Method: 410.4  
 Preparation: N/A**

LCS Lab Sample ID: LCS 280-156549/3  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/21/2013 1500  
 Prep Date: N/A  
 Leach Date: N/A

Units: mg/L

LCSD Lab Sample ID: LCSD 280-156549/4  
 Client Matrix: Water  
 Dilution: 1.0  
 Analysis Date: 01/21/2013 1500  
 Prep Date: N/A  
 Leach Date: N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Chemical Oxygen Demand	50.0	50.0	49.3	49.9

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156549**

**Method: 410.4  
Preparation: N/A**

MS Lab Sample ID:	280-37849-A-10 MS	Analysis Batch:	280-156549	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/21/2013 1500			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

MSD Lab Sample ID:	280-37849-A-10 MSD	Analysis Batch:	280-156549	Instrument ID:	WC_HACH SPEC
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/21/2013 1500			Final Weight/Volume:	100 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Chemical Oxygen Demand	93	91	90 - 110	2	11		

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 280-156549**

**Method: 410.4  
Preparation: N/A**

MS Lab Sample ID:	280-37849-A-10 MS	Units:	mg/L	MSD Lab Sample ID:	280-37849-A-10 MSD
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/21/2013 1500			Analysis Date:	01/21/2013 1500
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	Sample Result/Qual	MS Spike Amount	MSD Spike Amount	MS Result/Qual	MSD Result/Qual
Chemical Oxygen Demand	ND	50.0	50.0	46.7	45.7

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 280-156239**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	MB 280-156239/3	Analysis Batch:	280-156239	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	250 mL
Analysis Date:	01/17/2013 1615	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Result	Qual	MDL	RL
Total Suspended Solids	ND		1.1	4.0

**Lab Control Sample/**

**Method: SM 2540D**

**Lab Control Sample Duplicate Recovery Report - Batch: 280-156239**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-156239/1	Analysis Batch:	280-156239	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/17/2013 1615	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

LCSD Lab Sample ID:	LCSD 280-156239/2	Analysis Batch:	280-156239	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	100 mL
Analysis Date:	01/17/2013 1615	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Total Suspended Solids	94	88	86 - 114	7	20		

**Laboratory Control/**

**Method: SM 2540D**

**Laboratory Duplicate Data Report - Batch: 280-156239**

**Preparation: N/A**

LCS Lab Sample ID:	LCS 280-156239/1	Units:	mg/L	LCSD Lab Sample ID:	LCSD 280-156239/2
Client Matrix:	Water			Client Matrix:	Water
Dilution:	1.0			Dilution:	1.0
Analysis Date:	01/17/2013 1615			Analysis Date:	01/17/2013 1615
Prep Date:	N/A			Prep Date:	N/A
Leach Date:	N/A			Leach Date:	N/A

Analyte	LCS Spike Amount	LCSD Spike Amount	LCS Result/Qual	LCSD Result/Qual
Total Suspended Solids	100	100	94.0	88.0

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Duplicate - Batch: 280-156239**

**Method: SM 2540D**

**Preparation: N/A**

Lab Sample ID:	280-37877-1	Analysis Batch:	280-156239	Instrument ID:	No Equipment
Client Matrix:	Water	Prep Batch:	N/A	Lab File ID:	N/A
Dilution:	1.0	Leach Batch:	N/A	Initial Weight/Volume:	50 mL
Analysis Date:	01/17/2013 1615	Units:	mg/L	Final Weight/Volume:	250 mL
Prep Date:	N/A				
Leach Date:	N/A				

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Total Suspended Solids	340	332	4	10	

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Method Blank - Batch: 280-157640**

**Method: Total Nitrogen  
Preparation: N/A**

Lab Sample ID: MB 280-157640/1  
Client Matrix: Water  
Dilution: 1.0  
Analysis Date: 01/29/2013 0941  
Prep Date: N/A  
Leach Date: N/A

Analysis Batch: 280-157640  
Prep Batch: N/A  
Leach Batch: N/A  
Units: mg/L

Instrument ID: No Equipment  
Lab File ID: N/A  
Initial Weight/Volume:  
Final Weight/Volume:

Analyte	Result	Qual	MDL	RL
Nitrogen, Total	ND		0.042	0.10

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Laboratory Chronicle**

Lab ID: 280-37877-1

Client ID: DB01-E

Sample Date/Time: 01/14/2013 12:58

Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-37877-D-1-A		280-156637	280-156338	01/18/2013 12:09	1	TAL DEN	KS
A:625	280-37877-D-1-A		280-156637	280-156338	01/23/2013 01:53	1	TAL DEN	MGH
A:218.6	280-37877-H-1		440-80111		01/22/2013 18:01	1	TAL IRV	RW
P:200.7	280-37877-I-1-A		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	280-37877-I-1-A		280-156608	280-156288	01/21/2013 15:09	1	TAL DEN	JKH
P:245.1	280-37877-I-1-B		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	280-37877-I-1-B		280-156661	280-156483	01/21/2013 15:27	1	TAL DEN	JM
P:1664A	280-37877-A-1-A		280-157163	280-157107	01/24/2013 12:19	1	TAL DEN	AFB
A:1664A	280-37877-A-1-A		280-157163	280-157107	01/24/2013 15:38	1	TAL DEN	AFB
A:350.1	280-37877-G-1		280-156746		01/22/2013 12:16	1	TAL DEN	AJA
P:351.2	280-37877-F-1-A		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	280-37877-F-1-A		280-156999	280-156949	01/23/2013 23:14	1	TAL DEN	MW
A:353.2	280-37877-G-1		280-156933		01/23/2013 12:25	1	TAL DEN	SJS
P:365.2/365.3/365	280-37877-G-1-A		280-156693	280-156507	01/21/2013 11:39	2	TAL DEN	SJS
A:365.1	280-37877-G-1-A		280-156693	280-156507	01/22/2013 11:02	2	TAL DEN	SJS
A:410.4	280-37877-F-1		280-156549		01/22/2013 10:44	1	TAL DEN	DFB
A:SM 2540D	280-37877-E-1		280-156239		01/17/2013 16:15	1	TAL DEN	MW
A:Total Nitrogen	280-37877-A-1		280-157640		01/29/2013 09:41	1	TAL DEN	RS
A:Field Sampling	280-37877-A-1		280-156321		01/14/2013 12:58	1	TAL DEN	FS

Lab ID: 280-37877-1 MS

Client ID: DB01-E

Sample Date/Time: 01/14/2013 12:58

Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:245.1	280-37877-I-1-C MS		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	280-37877-I-1-C MS		280-156661	280-156483	01/21/2013 15:29	1	TAL DEN	JM
A:353.2	280-37877-G-1 MS		280-156933		01/23/2013 12:27	1	TAL DEN	SJS
P:365.2/365.3/365	280-37877-G-1-B MS		280-156693	280-156507	01/21/2013 11:39	2	TAL DEN	SJS
A:365.1	280-37877-G-1-B MS		280-156693	280-156507	01/22/2013 11:02	2	TAL DEN	SJS

Lab ID: 280-37877-1 MSD

Client ID: DB01-E

Sample Date/Time: 01/14/2013 12:58

Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:245.1	280-37877-I-1-D MSD		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	280-37877-I-1-D MSD		280-156661	280-156483	01/21/2013 15:31	1	TAL DEN	JM
A:353.2	280-37877-G-1 MSD		280-156933		01/23/2013 12:28	1	TAL DEN	SJS
P:365.2/365.3/365	280-37877-G-1-C MSD		280-156693	280-156507	01/21/2013 11:39	2	TAL DEN	SJS
A:365.1	280-37877-G-1-C MSD		280-156693	280-156507	01/22/2013 11:02	2	TAL DEN	SJS

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Laboratory Chronicle**

Lab ID: 280-37877-1 DU

Client ID: DB01-E

Sample Date/Time: 01/14/2013 12:58

Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:SM 2540D	280-37877-E-1 DU		280-156239		01/17/2013 16:15	1	TAL DEN	MW

Lab ID: 280-37877-2

Client ID: FLIP BUCKET

Sample Date/Time: 01/14/2013 13:07

Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	280-37877-D-2-A		280-156637	280-156338	01/18/2013 12:09	4	TAL DEN	KS
A:625	280-37877-D-2-A		280-156637	280-156338	01/23/2013 07:37	4	TAL DEN	MGH
A:218.6	280-37877-H-2		440-80111		01/22/2013 18:14	1	TAL IRV	RW
P:200.7	280-37877-I-2-A		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	280-37877-I-2-A		280-156608	280-156288	01/21/2013 15:11	1	TAL DEN	JKH
P:245.1	280-37877-I-2-B		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	280-37877-I-2-B		280-156661	280-156483	01/21/2013 15:34	1	TAL DEN	JM
P:1664A	280-37877-B-2-A		280-157163	280-157107	01/24/2013 12:19	1	TAL DEN	AFB
A:1664A	280-37877-B-2-A		280-157163	280-157107	01/24/2013 15:38	1	TAL DEN	AFB
A:350.1	280-37877-F-2		280-156746		01/22/2013 12:19	1	TAL DEN	AJA
P:351.2	280-37877-F-2-B		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	280-37877-F-2-B		280-156999	280-156949	01/23/2013 23:15	1	TAL DEN	MW
A:353.2	280-37877-F-2		280-156933		01/23/2013 12:30	1	TAL DEN	SJS
P:365.2/365.3/365	280-37877-F-2-A		280-156693	280-156507	01/21/2013 11:39	1	TAL DEN	SJS
A:365.1	280-37877-F-2-A		280-156693	280-156507	01/22/2013 09:47	1	TAL DEN	SJS
A:410.4	280-37877-G-2		280-156549		01/22/2013 10:44	1	TAL DEN	DFB
A:SM 2540D	280-37877-E-2		280-156239		01/17/2013 16:15	1	TAL DEN	MW
A:Total Nitrogen	280-37877-A-2		280-157640		01/29/2013 09:41	1	TAL DEN	RS
A:Field Sampling	280-37877-A-2		280-156321		01/14/2013 13:07	1	TAL DEN	FS

Lab ID: 280-37877-2 MS

Client ID: FLIP BUCKET

Sample Date/Time: 01/14/2013 13:07

Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	280-37877-H-2 MS		440-80111		01/22/2013 18:26	1	TAL IRV	RW

Lab ID: 280-37877-2 MSD

Client ID: FLIP BUCKET

Sample Date/Time: 01/14/2013 13:07

Received Date/Time: 01/17/2013 09:00

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:218.6	280-37877-H-2 MSD		440-80111		01/22/2013 18:39	1	TAL IRV	RW

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Laboratory Chronicle**

Lab ID: MB

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	MB 280-156338/1-A		280-156637	280-156338	01/18/2013 12:09	1	TAL DEN	KS
A:625	MB 280-156338/1-A		280-156637	280-156338	01/23/2013 00:09	1	TAL DEN	MGH
A:218.6	MB 440-80111/3		440-80111		01/22/2013 06:58	1	TAL IRV	RW
P:200.7	MB 280-156288/1-A		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	MB 280-156288/1-A		280-156608	280-156288	01/21/2013 14:51	1	TAL DEN	JKH
P:245.1	MB 280-156483/1-A		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	MB 280-156483/1-A		280-156661	280-156483	01/21/2013 15:13	1	TAL DEN	JM
P:1664A	MB 280-157107/1-A		280-157163	280-157107	01/24/2013 12:19	1	TAL DEN	AFB
A:1664A	MB 280-157107/1-A		280-157163	280-157107	01/24/2013 15:38	1	TAL DEN	AFB
A:350.1	MB 280-156746/21		280-156746		01/22/2013 10:11	1	TAL DEN	AJA
A:350.1	MB 280-156746/56		280-156746		01/22/2013 11:41	1	TAL DEN	AJA
P:351.2	MB 280-156949/3-A		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	MB 280-156949/3-A		280-156999	280-156949	01/23/2013 22:46	1	TAL DEN	MW
A:353.2	MB 280-156933/20		280-156933		01/23/2013 12:18	1	TAL DEN	SJS
P:365.2/365.3/365	MB 280-156507/5-A		280-156693	280-156507	01/21/2013 11:39	1	TAL DEN	SJS
A:365.1	MB 280-156507/5-A		280-156693	280-156507	01/22/2013 09:13	1	TAL DEN	SJS
A:410.4	MB 280-156549/5		280-156549		01/21/2013 15:00	1	TAL DEN	DFB
A:SM 2540D	MB 280-156239/3		280-156239		01/17/2013 16:15	1	TAL DEN	MW
A:Total Nitrogen	MB 280-157640/1		280-157640		01/29/2013 09:41	1	TAL DEN	RS

Lab ID: LCS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCS 280-156338/2-A		280-156637	280-156338	01/18/2013 12:09	1	TAL DEN	KS
A:625	LCS 280-156338/2-A		280-156637	280-156338	01/22/2013 11:33	1	TAL DEN	MGH
A:218.6	LCS 440-80111/2		440-80111		01/22/2013 06:46	1	TAL IRV	RW
P:200.7	LCS 280-156288/2-A		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	LCS 280-156288/2-A		280-156608	280-156288	01/21/2013 14:53	1	TAL DEN	JKH
P:245.1	LCS 280-156483/2-A		280-156661	280-156483	01/21/2013 11:30	1	TAL DEN	JM
A:245.1	LCS 280-156483/2-A		280-156661	280-156483	01/21/2013 15:20	1	TAL DEN	JM
P:1664A	LCS 280-157107/2-A		280-157163	280-157107	01/24/2013 12:19	1	TAL DEN	AFB
A:1664A	LCS 280-157107/2-A		280-157163	280-157107	01/24/2013 15:38	1	TAL DEN	AFB
A:350.1	LCS 280-156746/54		280-156746		01/22/2013 11:37	1	TAL DEN	AJA
P:351.2	LCS 280-156949/1-A		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	LCS 280-156949/1-A		280-156999	280-156949	01/23/2013 22:44	1	TAL DEN	MW
A:353.2	LCS 280-156933/21		280-156933		01/23/2013 12:19	1	TAL DEN	SJS
P:365.2/365.3/365	LCS 280-156507/3-A		280-156693	280-156507	01/21/2013 11:39	1	TAL DEN	SJS
A:365.1	LCS 280-156507/3-A		280-156693	280-156507	01/22/2013 09:13	1	TAL DEN	SJS
A:410.4	LCS 280-156549/3		280-156549		01/21/2013 15:00	1	TAL DEN	DFB
A:SM 2540D	LCS 280-156239/1		280-156239		01/17/2013 16:15	1	TAL DEN	MW

**Quality Control Results**

Client: Waste Management

Job Number: 280-37877-1

**Laboratory Chronicle**

Lab ID: LCSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:625	LCSD		280-156637	280-156338	01/18/2013 12:09	1	TAL DEN	KS
A:625	280-156338/3-A LCSD		280-156637	280-156338	01/22/2013 11:55	1	TAL DEN	MGH
P:1664A	LCSD		280-157163	280-157107	01/24/2013 12:19	1	TAL DEN	AFB
A:1664A	280-157107/3-A LCSD		280-157163	280-157107	01/24/2013 15:38	1	TAL DEN	AFB
A:350.1	LCSD 280-156746/55		280-156746		01/22/2013 11:39	1	TAL DEN	AJA
P:351.2	LCSD		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	280-156949/2-A LCSD		280-156999	280-156949	01/23/2013 22:45	1	TAL DEN	MW
A:353.2	LCSD 280-156933/22		280-156933		01/23/2013 12:21	1	TAL DEN	SJS
P:365.2/365.3/365	LCSD		280-156693	280-156507	01/21/2013 11:39	1	TAL DEN	SJS
A:365.1	280-156507/4-A LCSD		280-156693	280-156507	01/22/2013 09:13	1	TAL DEN	SJS
A:410.4	LCSD 280-156549/4		280-156549		01/21/2013 15:00	1	TAL DEN	DFB
A:SM 2540D	LCSD 280-156239/2		280-156239		01/17/2013 16:15	1	TAL DEN	MW

Lab ID: MRL

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
A:353.2	MRL 280-156933/18		280-156933		01/23/2013 12:15	1	TAL DEN	SJS

Lab ID: MS

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-37922-D-1-B MS		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	280-37922-D-1-B MS		280-156608	280-156288	01/21/2013 15:00	1	TAL DEN	JKH
A:350.1	280-37851-B-1 MS		280-156746		01/22/2013 11:46	1	TAL DEN	AJA
P:351.2	280-37809-A-2-C MS		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	280-37809-A-2-C MS		280-156999	280-156949	01/23/2013 22:49	1	TAL DEN	MW
A:410.4	280-37849-A-10 MS		280-156549		01/21/2013 15:00	1	TAL DEN	DFB

## Quality Control Results

Client: Waste Management

Job Number: 280-37877-1

### Laboratory Chronicle

Lab ID: MSD

Client ID: N/A

Sample Date/Time: N/A

Received Date/Time: N/A

Method	Bottle ID	Run	Analysis Batch	Prep Batch	Date Prepared / Analyzed	Dil	Lab	Analyst
P:200.7	280-37922-D-1-C MSD		280-156608	280-156288	01/21/2013 08:30	1	TAL DEN	JA
A:200.7 Rev 4.4	280-37922-D-1-C MSD		280-156608	280-156288	01/21/2013 15:02	1	TAL DEN	JKH
A:350.1	280-37851-B-1 MSD		280-156746		01/22/2013 11:48	1	TAL DEN	AJA
P:351.2	280-37809-A-2-D MSD		280-156999	280-156949	01/23/2013 16:10	1	TAL DEN	MW
A:351.2	280-37809-A-2-D MSD		280-156999	280-156949	01/23/2013 22:50	1	TAL DEN	MW
A:410.4	280-37849-A-10 MSD		280-156549		01/21/2013 15:00	1	TAL DEN	DFB

#### Lab References:

TAL DEN = TestAmerica Denver

TAL IRV = TestAmerica Irvine

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Honolulu

99-193 Aiea Heights Drive, Suite 121

Aiea, HI 96701

Tel: 808-486-5227

TestAmerica Job ID: HWA0071

Client Project/Site: Denver 280-37877-1

Client Project Description: AECOM, WGSL STORMWATER

Revision: 1

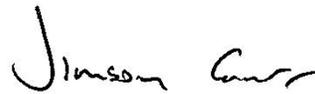
For:

TestAmerica Denver

4955 Yarrow Street

Arvada, CO 80002

Attn: Betsy Sarah



Authorized for release by:

1/29/2013 12:42:01 AM

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Designee for

Kristie Reilly

Project Manager

[Kristie.Brachmann@testamericainc.com](mailto:Kristie.Brachmann@testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

### LINKS

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# Definitions/Glossary

Client: TestAmerica Denver  
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
☼	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
DL, RA, RE, IN	Indicates a Dilution, Reanalysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
EDL	Estimated Detection Limit
EPA	United States Environmental Protection Agency
MDA	Minimum detectable activity
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Case Narrative

Client: TestAmerica Denver  
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

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**Job ID: HWA0071**

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**Laboratory: TestAmerica Honolulu**

## Narrative

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The results listed within this Laboratory Report pertain only to the samples tested in the laboratory unless otherwise stated in the report. The analyses contained in this report were performed in accordance with the applicable certifications as noted. All soil samples are reported on a wet weight basis unless otherwise noted in the report. This Laboratory Report is confidential and is intended for the sole use of TestAmerica and its client. This report shall not be reproduced, except in full, without written permission from TestAmerica. TestAmerica Analytical Testing Corporation certifies that the analytical results contained herein apply only to the specific sample(s) analyzed.

The Chain(s) of Custody are included and are an integral part of this report. This entire report was reviewed and approved for release.

If you have any questions relating to this analytical report, please contact your Laboratory Project Manager at 1-(808)486-5227

## LABORATORY REPORT

At sample receipt, the cooler/sample was 4 degrees C.

NELAC states that samples which require thermal preservation shall be considered acceptable if the arrival temperature is within 2 degrees C of the required temperature or the method specified range. For samples with a temperature requirement of 4 degrees C, an arrival temperature from 0 degrees C to 6 degrees C meets specifications. Samples that are delivered to the laboratory on the same day that they are collected may not meet these criteria. In these cases, the samples are considered acceptable if there is evidence that the chilling process has begun, such as arrival on ice.

The reported results were obtained in compliance with the 2003 NELAC standards unless otherwise noted.



# Sample Summary

Client: TestAmerica Denver  
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
HWA0071-01	DB01-E	Water - NonPotable	01/14/13 12:58	01/14/13 14:40
HWA0071-02	FLIP BUCKET	Water - NonPotable	01/14/13 13:07	01/14/13 14:40

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# Detection Summary

Client: TestAmerica Denver  
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

## Client Sample ID: DB01-E

## Lab Sample ID: HWA0071-01

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	5.87		2.00		mg/L	1.00		SM5210B	Total

## Client Sample ID: FLIP BUCKET

## Lab Sample ID: HWA0071-02

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
BOD - 5 Day	20.0		2.00		mg/L	1.00		SM5210B	Total

This Detection Summary does not include radiochemical test results.

TestAmerica Honolulu



# Client Sample Results

Client: TestAmerica Denver  
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

**Client Sample ID: DB01-E**

Date Collected: 01/14/13 12:58

Date Received: 01/14/13 14:40

**Lab Sample ID: HWA0071-01**

Matrix: Water - NonPotable

**Method: SM5210B - General Chemistry Parameters**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	5.87		2.00		mg/L		01/16/13 11:35	01/21/13 11:35	1.00

**Client Sample ID: FLIP BUCKET**

Date Collected: 01/14/13 13:07

Date Received: 01/14/13 14:40

**Lab Sample ID: HWA0071-02**

Matrix: Water - NonPotable

**Method: SM5210B - General Chemistry Parameters**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	20.0		2.00		mg/L		01/16/13 11:33	01/21/13 11:31	1.00

# QC Sample Results

Client: TestAmerica Denver  
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

## Method: SM5210B - General Chemistry Parameters

Lab Sample ID: 13A0014-BLK1  
Matrix: Water - NonPotable  
Analysis Batch: 13A0014

Client Sample ID: Method Blank  
Prep Type: Total  
Prep Batch: 13A0014\_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
BOD - 5 Day	ND		2.00		mg/L		01/16/13 11:07	01/21/13 11:01	1.00

Lab Sample ID: 13A0014-BS1  
Matrix: Water - NonPotable  
Analysis Batch: 13A0014

Client Sample ID: Lab Control Sample  
Prep Type: Total  
Prep Batch: 13A0014\_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
BOD - 5 Day	198	194		mg/L		98	85 - 115

Lab Sample ID: 13A0014-DUP1  
Matrix: Water - NonPotable  
Analysis Batch: 13A0014

Client Sample ID: Duplicate  
Prep Type: Total  
Prep Batch: 13A0014\_P

Analyte	Sample Result	Sample Qualifier	Duplicate Result	Duplicate Qualifier	Unit	D	RPD	Limit
BOD - 5 Day	3.07		2.98		mg/L		3	20

# QC Association Summary

Client: TestAmerica Denver  
 Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

## WetChem

### Analysis Batch: 13A0014

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13A0014-BLK1	Method Blank	Total	Water - NonPotable	SM5210B	13A0014_P
13A0014-BS1	Lab Control Sample	Total	Water - NonPotable	SM5210B	13A0014_P
13A0014-DUP1	Duplicate	Total	Water - NonPotable	SM5210B	13A0014_P
HWA0071-01	DB01-E	Total	Water - NonPotable	SM5210B	13A0014_P
HWA0071-02	FLIP BUCKET	Total	Water - NonPotable	SM5210B	13A0014_P

### Prep Batch: 13A0014\_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
13A0014-BLK1	Method Blank	Total	Water - NonPotable	Default Prep GenChem	
13A0014-BS1	Lab Control Sample	Total	Water - NonPotable	Default Prep GenChem	
13A0014-DUP1	Duplicate	Total	Water - NonPotable	Default Prep GenChem	
HWA0071-01	DB01-E	Total	Water - NonPotable	Default Prep GenChem	
HWA0071-02	FLIP BUCKET	Total	Water - NonPotable	Default Prep GenChem	

# Lab Chronicle

Client: TestAmerica Denver  
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

**Client Sample ID: DB01-E**

**Date Collected: 01/14/13 12:58**

**Date Received: 01/14/13 14:40**

**Lab Sample ID: HWA0071-01**

**Matrix: Water - NonPotable**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13A0014_P	01/16/13 11:35	NK	TAL HON
		GenChem						
Total	Analysis	SM5210B		1.00	13A0014	01/21/13 11:35	NK	TAL HON

**Client Sample ID: FLIP BUCKET**

**Date Collected: 01/14/13 13:07**

**Date Received: 01/14/13 14:40**

**Lab Sample ID: HWA0071-02**

**Matrix: Water - NonPotable**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total	Prep	Default Prep		1.00	13A0014_P	01/16/13 11:33	NK	TAL HON
		GenChem						
Total	Analysis	SM5210B		1.00	13A0014	01/21/13 11:31	NK	TAL HON

**Laboratory References:**

TAL HON = TestAmerica Honolulu, 99-193 Aiea Heights Drive, Suite 121, Aiea, HI 96701, TEL 808-486-5227

# Certification Summary

Client: TestAmerica Denver  
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

## Laboratory: TestAmerica Honolulu

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Florida	NELAP	4	E87907	06-30-13
Hawaii	State Program	9	N/A	06-28-13
USDA	Federal		HON-S-206	01-31-15

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# Method Summary

Client: TestAmerica Denver  
Project/Site: Denver 280-37877-1

TestAmerica Job ID: HWA0071

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Method	Method Description	Protocol	Laboratory
SM5210B	General Chemistry Parameters		TAL HON

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**Protocol References:**

**Laboratory References:**

TAL HON = TestAmerica Honolulu, 99-193 Aiea Heights Drive, Suite 121, Aiea, HI 96701, TEL 808-486-5227

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Rush TAT Confirmation (Initial/Date) \_\_\_\_\_

### Sample Receipt Checklist

Client Name: TA Denver Date/ Time Received: 1/29/13 1440

Received By: n

Matrices: AQ

Carrier: Client

Airbill# :

Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Not Present <input type="checkbox"/>
Chain of Custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	<input type="checkbox"/>
Chain of Custody Signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Chain of Custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper container/bottle?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers on ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Type: <u>Wet</u>
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Water - VOA Vials have Zero Headspace?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	No VOA Vials present: <input checked="" type="checkbox"/>
Water - pH acceptable upon receipt?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	Not Checked: <input checked="" type="checkbox"/>
	pH Adjusted? Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Final pH: _____
Encores / Mi-VOC / 5035 Vials Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Location: _____
Sample Filtration Needed?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Filtered in Field: <input type="checkbox"/>
Dry Weight Corrected Results?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Take Action: <input type="checkbox"/>
DODQSM / QAPP Project?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Type: _____
	Temperature Blank Present? Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
	Sample Container Temperature: <u>4</u> °C		

### Comments/ Sampling Handling Notes:

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LAB JOB NO. \_\_\_\_\_  
LOCATION \_\_\_\_\_  
CONTAINERS \_\_\_\_\_

**Chain of Custody / Analysis Request Form**

<b>Report to:</b> Mark Hofferbert Company name AECOM Technical Services, Inc. Address 1001 Bishop St., Suite 1600 City Honolulu HI 96813 Phone 808-523-8874 Fax 808-523-8950 # samples in shipment		<b>Project identification</b> Job name WGSL Stormwater Job number 60246625.02 Contact email address mark.hofferbert@aecom.com, margie.thach@aecom.com Date results needed 2 weeks	
--	--	--	--

Item no.	Client sample ID	COMP	GRAB	Matrix										Preservation method	Date	Time	No. of containers	1664 Oil & Grease	TSS SM2540D	625 SVOCs*	COD 410.4, T. Phos 365.1, NH3 350.1 NO2-NO3 353.2, T. Nitrogen SM4500N	200.7, 245.1 Metals*	indicate analyses requested	Laboratory ID no.														
				Water	Soil	Wastewater	Drinking water	Sludge	Liquid	Solid	Oil	Other																										
1	DBD1-E	X	X										HCl	01/14/13	1258	2	X																					
2		X	X										varies	01/14/13	1258	7	X																					
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Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Date / time received	Company / Agency affiliation	Condition noted
Margie Thach	01/14/13 1440	Hand	John Jimla	1/16/13 1440	TestAmerica	Swat wet 402
John Jimla	1/16/13 1045	Fedex	Margie Thach	1/17/13 0900		

Comments: \* SVOCs: alpha-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol. \*\* Metals: As, Cd, Fe, Pb, Hg, Se, Ag, Zn

TA - Honolulu  
Foot Candles to analyze BOD (SM 5210) and preserve CrVI (218.6); report to TA-Denver (PM: Betsy Sara). Drop Swipe to TA - Den

Please check one:  
 Dispose by lab  
 Return to client  
 Archive

Distribution: White - TestAmerica Yellow - TestAmerica Pink - Client

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 COG REV 04/2008

LAB JOB NO. \_\_\_\_\_  
 LOCATION \_\_\_\_\_  
 CONTAINERS \_\_\_\_\_

## Chain of Custody / Analysis Request Form

Item no.	Client sample ID	COMP	GRAB	Matrix										Preservation method	Sampling		No. of containers	1664 Oil & Grease	TSS SM2540D	625 SVOCs*	COD 410.4, T. Phos 365.1, NH3 350.1 NO2-NO3 353.2, T. Nitrogen SM4500N	200.7, 245.1 Metals**	BOD	CWT	Indicate analyses requested	Laboratory ID no.											
				Water	Soil	Wastewater	Drinking water	Sludge	Liquid	Solid	Oil	Other	Date		Time																						
01	Flip Bucket	X	X											HCl	01/14/13	1207	2	X																			
02		X	X											variesoil	01/14/13	1207	7																				
03																																					
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08																																					
09																																					
10																																					

Released by (print / sign)	Date / time released	Delivery method	Received by (print / sign)	Date / time received	Company / Agency affiliation	Condition noted
Margie Thach, Jnr	01/14/13 1440 HAWAII		<i>[Signature]</i>	1/16/13 1440	TestAmerica	Swat Wet 142
<i>[Signature]</i>	1/16/13 1045	Fedex	<i>[Signature]</i>	1/17/13 0900		

Please check one:  
 Dispose by lab  
 Return to client  
 Archive

Comments: \* SVOCs: alpha-terpineol, benzoic acid, p-cresol, pentachlorophenol, phenol. \*\* Metals: As, Cd, Fe, Pb, Hg, Se, Ag, Zn

FA HAWAII  
 Food Quality Labs to analyze BOD (SM 5210) and preserve CrVI (218.6); report to TA-Denver (PM: Betsy Sara).  
 Dropship to TA-DW

# FIELD INFORMATION FORM



Site Name: WGGL

**This Waste Management Field Information Form is Required**

This form is to be completed, in addition to any State Forms. The Field Form is submitted along with the Chain of Custody Forms that accompany the sample containers (i.e. with the cooler that is returned to the laboratory).

Laboratory Use Only/Lab ID: \_\_\_\_\_

Site No.: \_\_\_\_\_

Sample Point: DB01-E  
Sample ID

PURGE INFO	PURGE DATE (MM DD YY)	PURGE TIME (2400 Hr Clock)	ELAPSED HRS (hrs:min)	WATER VOL IN CASING (Gallons)	ACTUAL VOL PURGED (Gallons)	WELL VOLs PURGED

*Note: For Passive Sampling, replace "Water Vol in Casing" and "Well Vols Purged" w/ Water Vol in Tubing/Flow Cell and Tubing/Flow Cell Vols Purged. Mark changes, record field data, below.*

PURGE/SAMPLE EQUIPMENT	Purging and Sampling Equipment ... Dedicated: <input type="checkbox"/> Y or <input type="checkbox"/> N	Filter Device: <input type="checkbox"/> Y or <input type="checkbox"/> N, 0.45 $\mu$ or _____ $\mu$ (circle or fill in)	
	Purging Device: <input type="checkbox"/> A-Submersible Pump <input type="checkbox"/> D-Bailer	Filter Type: <input type="checkbox"/> A-In-line Disposable <input type="checkbox"/> C-Vacuum	
	Sampling Device: <u>F</u> <input type="checkbox"/> B-Peristaltic Pump <input type="checkbox"/> E-Piston Pump	<input type="checkbox"/> B-Pressure <input type="checkbox"/> X-Other _____	
	X-Other: _____	Sample Tube Type: <input type="checkbox"/> A-Teflon <input type="checkbox"/> C-PVC <input type="checkbox"/> X-Other: _____	
		<input type="checkbox"/> B-Stainless Steel <input type="checkbox"/> D-Polypropylene	

WELL DATA	Well Elevation (at TOC) _____ (ft/msl)	Depth to Water (DTW) (from TOC) _____ (ft)	Groundwater Elevation (site datum, from TOC) _____ (ft/msl)
	Total Well Depth (from TOC) _____ (ft)	Stick Up (from ground elevation) _____ (ft)	Casing ID _____ (in) Casing Material _____

*Note: Total Well Depth, Stick Up, Casing Id, etc. are optional and can be from historical data, unless required by Site/Permit. Well Elevation, DTW, and Groundwater Elevation must be current.*

STABILIZATION DATA (Optional)	Sample Time (2400 Hr Clock)	Rate/Unit	pH (std)	Conductance (SC/EC) ( $\mu$ mhos/cm @ 25°C)	Temp. (°C)	Turbidity (ntu)	D.O. (mg/L - ppm)	eH/ORP (mV)	DTW (ft)
			1 <sup>st</sup>	1 <sup>st</sup>	1 <sup>st</sup>				
		2 <sup>nd</sup>	2 <sup>nd</sup>	2 <sup>nd</sup>					
		3 <sup>rd</sup>	3 <sup>rd</sup>	3 <sup>rd</sup>					
		4 <sup>th</sup>	4 <sup>th</sup>	4 <sup>th</sup>					

*Suggested range for 3 consec. readings or note Permit/State requirements:*  
 pH: +/- 0.2    Conductance: +/- 3%    Temp: --    Turbidity: --    D.O.: +/- 10%    eH/ORP: +/- 25 mV    DTW: Stabilize

**Stabilization Data Fields are Optional** (i.e. complete stabilization readings for parameters required by WM, Site, or State). These fields can be used where four (4) field measurements are required by State/Permit/Site. If a Data Logger or other Electronic format is used, fill in final readings below and submit electronic data separately to Site. If more fields above are needed, use separate sheet or form.

FIELD DATA	SAMPLE DATE (MM DD YY)	pH (std)	CONDUCTANCE ( $\mu$ mhos/cm @ 25°C)	TEMP. (°C)	TURBIDITY (ntu)	DO (mg/L-ppm)	eH/ORP (mV)	Other: Units
	<u>01/14/13</u>	<u>8.97</u>						

**Final Field Readings are required** (i.e. record field measurements, final stabilized readings, passive sample readings before sampling for all field parameters required by State/Permit/Site).

Sample Appearance: murky    Odor: none    Color: brown-orange    Other: no scum / oil sheen

Weather Conditions (required daily, or as conditions change):    Direction/Speed: NW 15mph    Outlook: overcast    Precipitation: Y or (N)

Specific Comments (including purge/well volume calculations if required):  
Negligible/no flow at DB01-E and -W. Pounded water sampled at 01/14/13 12:58.

Depth of ponded water: DB01-E 12 in    DB01-W 1 in

I certify that sampling procedures were in accordance with applicable EPA, State, and WM protocols (if more than one sampler, all should sign):

<u>01, 14, 13</u>	<u>Margie Thack</u>	<u>[Signature]</u>
<u>01/14/13</u>	<u>Timothy Ashton</u>	<u>[Signature]</u>
Date	Name	Signature

\_\_\_\_\_  
AECOM  
Company



## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-37877-1

**Login Number: 37877**

**List Source: TestAmerica Denver**

**List Number: 1**

**Creator: Laspe, Laura**

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Sampling Company provided.	True	
Samples received within 48 hours of sampling.	True	
Samples requiring field filtration have been filtered in the field.	True	
Chlorine Residual checked.	N/A	

## Login Sample Receipt Checklist

Client: Waste Management

Job Number: 280-37877-1

**Login Number: 37877**  
**List Number: 1**  
**Creator: Soderblom, Tim**

**List Source: TestAmerica Irvine**  
**List Creation: 01/19/13 11:08 AM**

Question	Answer	Comment
Radioactivity wasn't checked or is <= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

NANAKULI STATION  
 WAIANAE, Hawaii  
 967923798  
 1424030281 -0099  
 (808)696-0161 01:47:23 PM  
 02/06/2013

Product Description	Sale Qty	Receipt Unit Price	Final Price
00 HONOLULU HI 96814 Zone-1 Priority Mail 13.90 oz. Expected Delivery: Thu 02/07/13			\$5.60
Return Rcpt (Green Card)			\$2.55
00 Certified Label #: 70111570000329828398			\$3.10
Issue PVI:			===== \$11.25

Total: \$11.25

Paid by:  
 Cash \$20.00  
 Change Due: -\$8.75

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PS Form 3800, August 2005 See Reverse for Instructions

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